

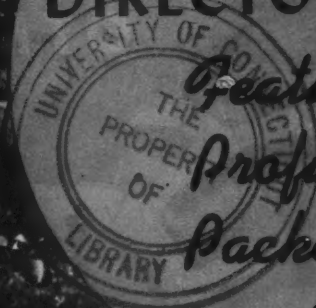
*American*

JULY • 1948

# FRUIT GROWER

YOUR  
DIRECTORY ISSUE

*Featuring  
Profitable  
Packaging*



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bronzed.

GROWER

These **FACTS** tell you **Why...**

# Firestone CHAMPION GROUND GRIPS OUTPULL ALL OTHER TRACTOR TIRES



The Only Tire That Takes  
a "CENTER BITE"



**The Champion Ground Grip Outpulls Because . . .** It cleans better. Its curved traction bars flare out from the center to make a wide open unrestricted exit for mud and trash. There are no broken center trash catchers.



**The Champion Ground Grip Outpulls Because . . .** The Triple-Braced traction bars take a full, firm bite right in the heart of the traction zone. There are no broken center traction leaks.



**The Champion Ground Grip Outpulls Because . . .** The tread bars are higher—up to 24% higher to take a deeper, firmer bite. Of course, higher bars last longer.



**The Champion Ground Grip Outpulls Because . . .** The tread bars are longer—as much as 256 inches per tractor. Greater tread bar length naturally gives greater pulling power—and longer wear.



**The Champion Ground Grip Outpulls Because . . .** The traction bars are higher at the shoulders for reserve pulling power, especially in soft ground where it needs the extra pulling power of an extra bite.

Copyright, 1948. The Firestone Tire & Rubber Co.

**Put CHAMPION Ground Grips on Your Tractor**  
**LET THE TEST TELL THE TRUTH**



# MORE PROFIT FOR YOU

*in Modern Packaging*

Retailers and retail customers today are package-minded. Many a fruit grower in the 1947 season demonstrated to his own satisfaction what FARM-PAK Baskets and Top o' the Crop Apple Cartons could do to improve sales and profits. This year the possibilities are greater than last year. New packaging specialties developed in cooperation with experienced and successful growers extend your opportunity beyond anything previously available. Our new book "Packaging for Profit" gives you full information about our complete line of packaging for fruit and vegetable growers.

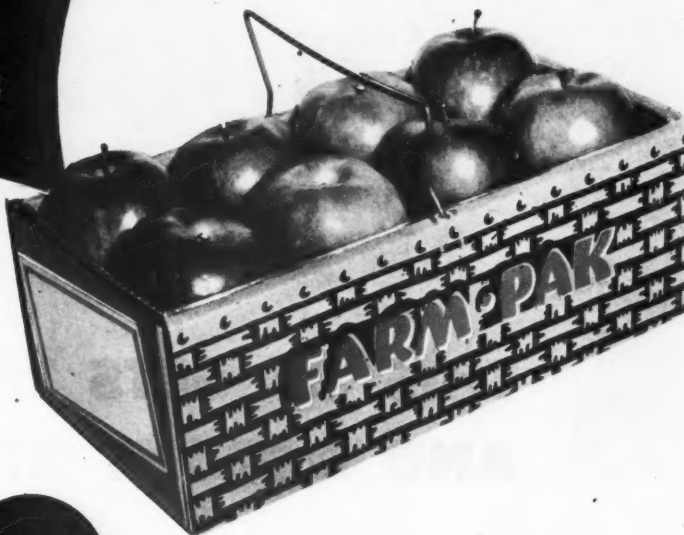


## TOP O' THE CROP 4 lb. Apple Cartons

The big success of this 4-pound apple carton in 1947 was due to special and exclusive advantages for sales display and convenience in packing. May be jumble- or place-packed semi-automatically or by hand. Rigid carton construction protects against bruising in shipment and handling. Ideal for mass display. Easily set up without gluing or stapling.

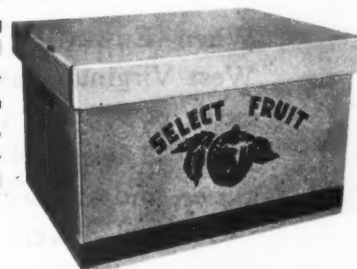
## FARM-PAK Baskets

A big success last year. Made of strong corrugated board attractively printed in red and green. Space to stamp or label your name and address. Now available in 3 sizes—4, 8, and 12 quarts. Shipped to you flat for convenient storage in limited space. Easy to set up.



## For sales by the bushel—

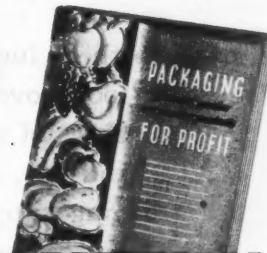
This new apple box of one bushel capacity provides the same attractive appearance you find in our other fruit marketing specialties. Strong corrugated board; rigid construction with double sidewalls, triple ends; printed in red and green.



THE OHIO BOXBOARD CO.  
RITTMAN, OHIO

**FREE** ➡

Mail coupon for this book of valuable information on selling produce.



The Ohio Boxboard Co., Rittman, Ohio  
Please mail me a copy of  
"Packaging for Profit."

Name.....

R.F.D. or St. No.....

City..... State.....



## THIS D4 GETS THE HEAVY WORK AND DOES IT AT A BARGAIN . . .

*... for Edward Swisher, Jr., Levels, West Virginia*

When Edward Swisher, Jr., Levels, West Virginia, has work that requires extra power and traction, his "Caterpillar" Diesel D4 Tractor does it on time—and at bargain rates.

The D4 powers a large power take-off sprayer, for example, on only 1¼ gallons of Diesel fuel per hour. It clears land for new orchard on only one gallon of fuel hourly! On only \$2.40 worth of fuel, it pulls the heavy-duty 11-foot cover crop disk to cultivate 35 acres of apple orchard in 10 hours.

And Mr. Swisher saved the cost of digging ditch by using the D4 and

subsoiler to lay 8000 feet of 2-inch pipe in his orchard!

"Not one single bit of trouble with the D4, since purchasing it 3 years ago," states Mr. Swisher. "I also own a D2 which has over 3400 hours on the meter. My gasoline Twenty-Two (after 12 years of use) still does an excellent job on farm and orchard work."

The fruit-grower with a "Caterpillar" Diesel Tractor can schedule his work with the certainty of doing it without delay—with all-soil, all-weather traction, and dependable power that doesn't know how to quit pulling!

CATERPILLAR TRACTOR CO., PEORIA, ILLINOIS

# CATERPILLAR DIESEL

REG. U.S. PAT. OFF.

ENGINES • TRACTORS • MOTOR GRADERS • EARTHMOVING EQUIPMENT

# NOW Pliofilm Keeps Apples Orchard-Fresh

**1 to 3 Months Longer**



Picked at the same time, but look at the difference after six months!

*Protected by Pliofilm*

*Conventional wrap*

NOW you can storage apples in **Plio**film for long periods, and still keep them free from the usual storage hazards.

This was proved conclusively in a recent test at the horticultural laboratories of a large state college. Apples were packed in a conventional storage case lined with **Plio**film. Results showed:

1. Weight-loss reduced to one-half or one-fourth normal.
2. Number of apples showing shrivel reduced almost to zero.
3. Color and ripeness maintained at appetizing

levels one to three times longer than in ordinary storage.

4. Jonathan spot practically eliminated.

**Plio**film, Goodyear's famous moisture-air-tight packaging film, is easy and inexpensive to use. You'll find it by far the best method yet devised for protecting your product and securing top market prices. For further information, write: Goodyear, Pliofilm Department, Akron 16, Ohio.

Everything is better in **Plio**film



3-way protection against air, moisture, liquids

**GOODYEAR**

THE GREATEST NAME IN RUBBER

*Plio*film - T.M. The Goodyear Tire & Rubber Company

AMERICAN FRUIT GROWER



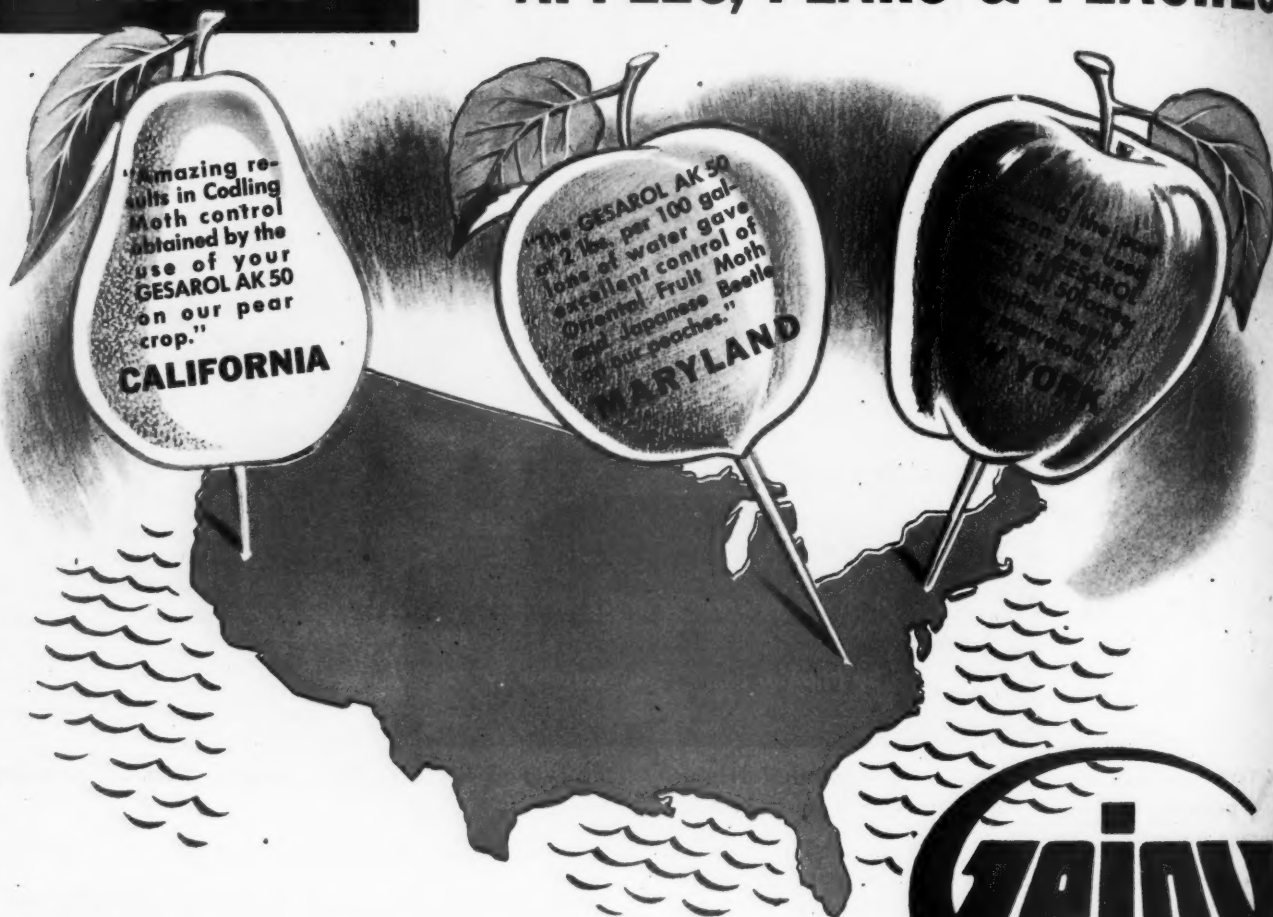
*Reports like these*

FROM NEW YORK TO CALIFORNIA

*show It Pays to Use*

**GESAROL  
AK 50**

for Pest Control on  
**APPLES, PEARS & PEACHES**



From all over the country evidence keeps piling up from fruit growers to further confirm the amazing effectiveness of GESAROL\* AK 50—evidence which demonstrates over and over again the dollar and sense wisdom of using this tried-and-proven DDT composition—formulated by Geigy Company—  
"Originators of DDT Insecticides."

\*Reg. U.S. Pat. Off.

**NOTICE TO DISTRIBUTORS!**  
A few desirable Territories still open. Write us if you are interested in handling an established, fast-selling line of DDT Compositions.

**GEIGY COMPANY, Inc.**

89 Barclay St., New York 8, N.Y.



ORIGINATORS OF  
**DDT**  
INSECTICIDES

Use  
ACHES

**Handles More Jobs Than  
Any Other Farm Tractor!**

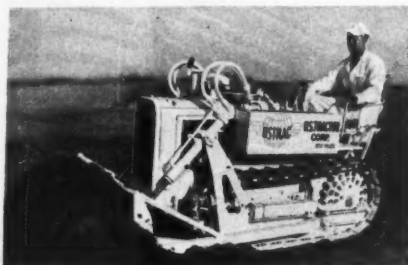


## Built for the "Impossible" Jobs that the Average Farm Tractor Can't Handle...

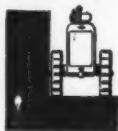
Along with heavy duty plowing, disking, harrowing, harvesting and other normal

farm uses, the USTRAC is ideal for terracing and soil erosion work, digging drainage ditches, irrigation work, building dikes and dams, land leveling, road repairing, etc. Excellent for land clearing (uproots 6-inch trees), grubbing hedge, removing rocks and stumps.

Small but powerful. Delivers 20 HP at the drawbar, yet is only 37 inches wide and 54 inches high. Extremely maneuverable and easy to operate. Economical — cuts fuel costs as much as one-third over wheel type tractors. Will operate in wet, loose ground where a wheel tractor would bog down. Ideal for early spring plowing, harvesting in muddy fields, etc. A real crop-saver on low, wet farms. No weather is too tough for the USTRAC — use it year-round!



Plenty of power and capacity on dozing jobs — the 5 ft. bulldozer has double hydraulic arms — 800 lbs. per sq. in. working pressure.



### Ideal for Orchards and Vineyards

Has low dimensions, narrow width and smooth contours. More ground-gripping power — no worry about wheel slippage or miring down. Can't be beat for hillside work; on rough terrain; in narrow working widths, etc.



### Proved Performance of Thousands of Tractors Stands Back of USTRAC's Dependability

The USTRAC gives you all the tested features of the Clark Airborne Tractor that performed so outstandingly during the war under rugged conditions. Thousands of these tested, proved tractors are in civilian use today. The USTRAC gives you this dependability, plus many new features adapted for farming and commercial use.

USTRAC's huge modern plant at Warren, Ohio is equipped with the latest equipment for manufacturing crawler-type tractors. Production capacity exceeds 1,000 per month. Each USTRAC is thoroughly checked and tested before leaving the factory.

**U. S. TRACTOR SALES DIV., INC., Peoria, Ill.**

- **PLOWING**  
(3-bottom 14' plow)
- **DISKING**  
(9 ft. tandem)
- **HARROWING**
- **CULTIVATING**  
(Between rows)
- **HARVESTING**  
(Power take-off)
- **BELT WORK**  
(25 HP)
- **ORCHARDS**  
(Only 54" high)
- **VINEYARDS**  
(Less than 1 meter wide)
- **TERRACING**
- **IRRIGATION DITCHES**
- **DRAINAGE DITCHES**
- **EROSION CONTROL**
- **POND BUILDING**
- **ROAD REPAIRING**
- **SNOW PLOWING**
- **HEDGE GRUBBING**
- **TREE & STUMP REMOVAL**  
(Uproots 6" trees)
- **LOGGING**
- **WINCHING**
- **BULLDOZING**
- **LANDSCAPING**
- **LAND LEVELING**

Gasoline Engine—4 cyl. Continental. 4 speeds forward, 4 reverse. Speeds up to 8.5 MPH.

**EARLY  
DELIVERY!**

Mail this coupon and  
get all the facts!

**U. S. TRACTOR SALES DIV., INC.  
PEORIA, ILL.**

I would like to know more about how the USTRAC can do more work, handle more jobs, and lower my operating costs. Send complete details and prices, and name of nearest dealer.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

STATE \_\_\_\_\_

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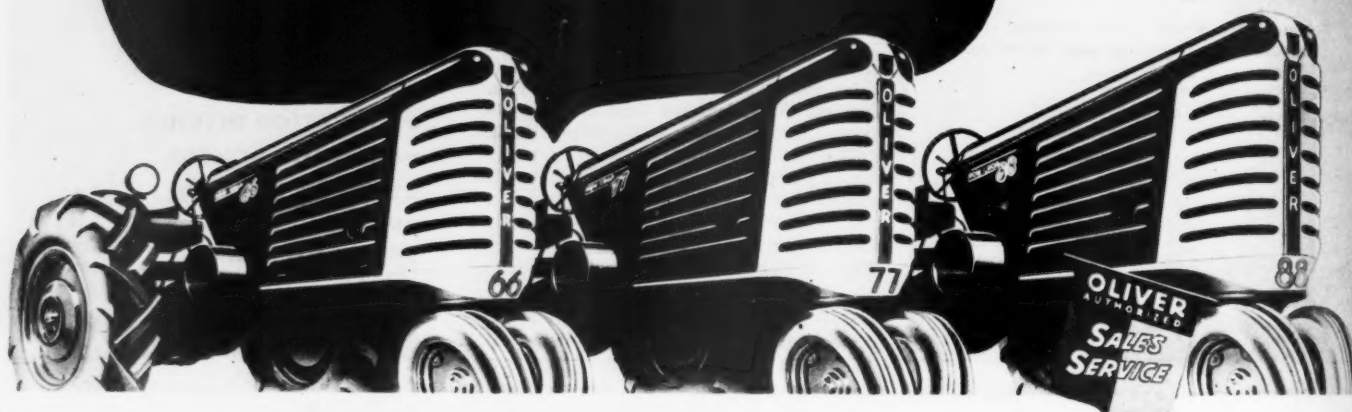
ROWER

JULY, 1948

# OLIVER

BEGINS

## Its Second Century



### with a New Fleet of Quality Tractors

Commemorating the beginning of its Second Century of service to American agriculture, The Oliver Corporation presents a new fleet of farm tractors with advanced features of practical value to those engaged in the business of farming with power.



The **OLIVER** Corporation 400 W. Madison St., Chicago 6, Ill.

# OLIVER

**"FINEST IN FARM MACHINERY"**

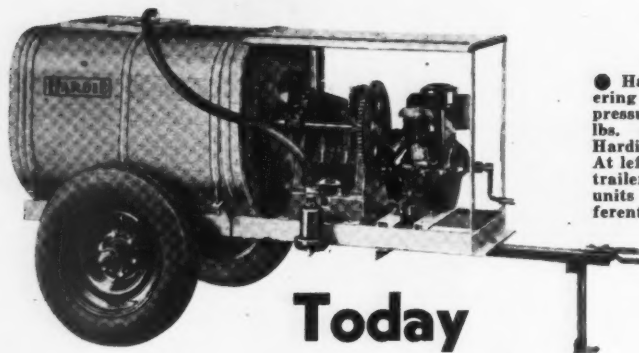
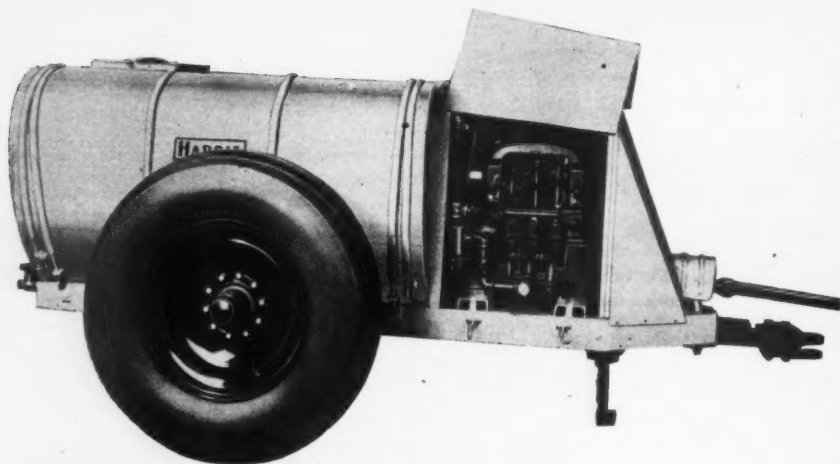


**of Worth**

 **FOOD MACHINERY CORPORATION**  
EXECUTIVE OFFICES: SAN JOSE 5, CALIFORNIA

**PACKING EQUIPMENT DIVISION**  
Riverside, California • Harlingen, Texas

**FLORIDA DIVISION**  
Lakeland, Florida



● Hardie builds sprayers delivering from 4 G.P.M. at 300 lbs. pressure to 80 G.P.M. at 1000 lbs. pressure. Above is the Hardie Imperial Tractor Trailer. At left, a Hardie engine equipped trailer. Both of these popular units are available in many different sizes.

## Today you need *more than a one-job sprayer*

No matter what may be your principal crop today you need a sprayer for many different jobs—tree spraying, weed spraying, row crop spraying, cattle and animal spraying, D.D.T. spraying, flushing out pens, and buildings with solid stream, whitewashing, water painting and fire control.

Hardie engineers have developed inexpensive booms and auxiliary devices easily attached that enable the owner of a Hardie High Pressure Sprayer to economically and quickly adapt his Hardie sprayer to any spraying job.



● The Hardie Sprayrite (at left) and Multi-Nozzle Orchard Booms give mass spray application—one man does the work of 10. Hardie Low Pressure Manifold makes a low pressure weed sprayer out of a high pressure Hardie for growth-regulating weed killers. Hardie Levelrite and Foldrite row crop booms bring a new ease and speed to row spraying. Hardie spray guns provide easy fast application for all hand gun work.

Write for the Hardie Catalog and data showing a wide variety of sizes and models. See how one Hardie does it all.

### The Hardie Mfg. Company

Hudson, Mich.

Los Angeles 11, Calif.

Portland 9, Oregon

C. W. Lewis & Son, Ltd.

Grimsby, Ont., Canada

Export Dept., Detroit 26

**Hardie**  
Dependable Sprayers

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Please notify us if you change your address, giving us the old address as well as your new one

[PRINTED  
IN U.S.A.]

**Thiophos**  
TRADE MARK **3422**  
**P. A. R. A. T. H. I. O. N**

## KILLS MITES, SPIDERS, APHIDS, OTHER PESTS

**THIOPHOS 3422**, the remarkable new basic ingredient for powerful insecticides is one of the most efficient pesticides ever offered fruit growers.

**THIOPHOS 3422** kills mites which multiply when DDT is used and thus solves the serious mite problem.

**ITS ACTION IS SUFFICIENTLY LONG-LASTING** to effect incredibly high kills against many types of fruit pests. Yet the active ingredient is volatile, leaving practically no residue at harvest.

**ECONOMICAL**—as inexpensive, to apply as any other insecticide, because **THIOPHOS 3422** is effective at remarkably small dosages. For example, only  $\frac{1}{2}$  lb. of 15% wettable powder makes 100 gallons of spray, for excellent control of European red mite or two-spotted

mite on apples; 1 lb. of 15% wettable powder per 100 gallons will control pear psylla.

**THIOPHOS 3422** mixes readily with wettable and dusting sulfurs, insoluble coppers, DDT, benzene hexachloride, rotenone, pyrethrum and lead arsenate.

*Be sure to follow manufacturers' directions for rate and time of application in your area.*

LOOK FOR THIS  
IDENTIFYING MARK  
ON THE LABEL

**Thiophos**  
TRADE MARK **3422**  
**P. A. R. A. T. H. I. O. N**

**WETTABLE POWDER AND DILUTE DUSTS  
MANUFACTURED FROM THIOPHOS 3422  
PARATHION WILL BE SUPPLIED THIS SEASON UNDER DIFFERENT TRADE NAMES  
BY WELL-KNOWN MANUFACTURERS.**

**AMERICAN CYANAMID COMPANY**

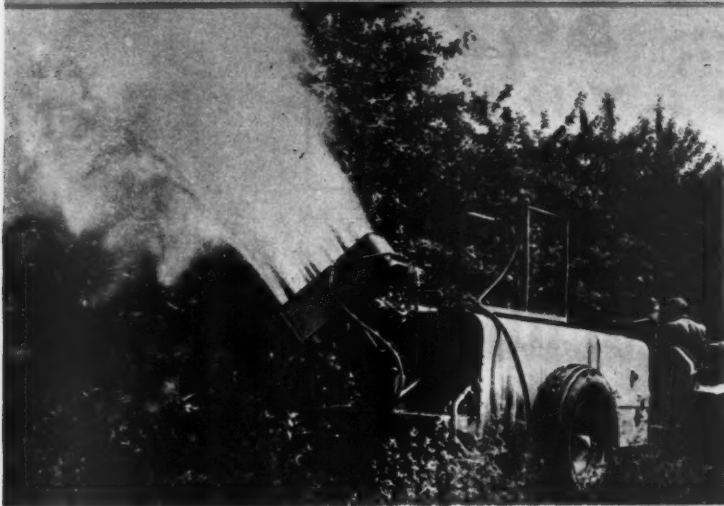
*Agricultural Chemicals Division*



30-X ROCKEFELLER PLAZA • NEW YORK 20, N. Y.



# If You Need Greater Coverage at Lower Cost... see **FARQUHAR IRON AGE**



## NEW! Iron Age Automatic-Oscillating Spray Head Gives You 2-Sprayers-in-1

... actually makes all Iron Age Sprayers universal. Designed for drive-through jobs with *controlled application*, Iron Age Spray Head assures you greater penetration and better all around coverage over other methods of high-speed spraying.



## IRON AGE Builds High Pressure Orchard Sprayers to Meet Every Grower's Need

Complete range of sizes and capacities for all orchard, grove or vineyard operators. Rugged construction assures long life, minimum upkeep—streamlined design permits easy passage between rows.



### Heart of Your Sprayer— **FAMOUS FARQUHAR IRON AGE PUMP**

Long life, slow speed Iron Age Pumps deliver the constant high pressures needed for thorough penetration and complete coverage at lowest cost. High pressure atomization makes every drop of insecticide count. Built in 8 sizes, 6 to 50 G.P.M. capacities, pressures up to 1000 lbs. per sq. in.

See your nearest Farquhar Iron Age Dealer for complete details on the size and model Iron Age Sprayer or Duster you need, or write for FREE descriptive Bulletins on Sprayers and/or Dusters to:  
**A. B. FARQUHAR COMPANY, Farm Equipment Division, 3425 Duke Street, York, Pennsylvania.**



## IRON AGE Offers Growers Complete Line of Orchard Dusters

Iron Age High Velocity Dusters are built in all capacities and sizes to provide quick, low-cost crop protection, no matter what the acreage. Precision built, high-speed-blower runs easily, delivers strong, accurate dust blast that assures complete penetration. Power take-off and engine-driven models for orchard or grove use.

**Farquhar**  
**IRON AGE**  
YORK, PA.

POTATO AND VEGETABLE PLANTERS • TRANSPLANTERS  
SPRAYERS • DUSTERS • POTATO DIGGERS • WEEDERS  
CONVEYORS • JUICE PRESSES • SPECIAL MACHINERY  
**PLANT AND SPRAY THE IRON AGE WAY**

# LETTERS TO THE EDITOR

## Readers Like Directory Idea

Sirs:

I really think you have something in the Directory number.

Of a great number of periodicals that I have subscribed to as a basis for my future farm and orchard activity, I believe that I am better satisfied with the AMERICAN FRUIT GROWER than any of them. It contains good information, philosophy, and no politics!

R. L. Winston

Gentlemen:

I just want to tell you what a fine issue your Directory number is. It has already saved me time in looking up supplies I wanted.

Oakland City, Ind.

C. L. Clayton

Dear Sir:

Your July issue of AMERICAN FRUIT GROWER is a dandy. I especially like the feature "What's New For Fruit Growers." Langhorne, Pa.

W. A. Shetland

Gentlemen:

We are subscribers to AMERICAN FRUIT GROWER, and have received the July issue. However, for reference purposes we could make considerable use of an additional copy and would like to have one if they are still available.

Riverhead, L. I., N. Y.

K. G. Regent

To reader Regent we are proud to present this new 1948 July Directory issue with an enlarged and illustrated Directory section.—Ed.

## Straight from the Shoulder

Dear Sir:

I was very interested in the June issue of the AMERICAN FRUIT GROWER which was devoted to marketing.

As a housewife who is the family purchasing agent, I was especially interested in the Letters to the Editor on the subject of prepackaging apples. The general idea seems to be that if the grower can package apples in 5- and 10- pound sacks, convenient for the housewife to carry home, most of his marketing troubles will disappear. I think you might be interested in the experiences of one housewife.

I used to buy oranges in orange mesh sacks, holding about 25 pounds. I went to the supermarket one morning when business was dull and weighed a sack of oranges and counted them. Then I weighed out oranges of about the same size from the fruit bins. I found that I could save money on prepackaged oranges if there were not more than two bad oranges per sack. However, last winter I quit buying packaged oranges because I found that I could not depend on the quality unless I got a brand which invariably had five to eight bad oranges in a 25-pound sack.

What do I think about prepackaging? If the product is first-rate, and I can see it (like some brands of limes), I'm all for it. But I will be very hesitant about buying a pig, or anything else, in a poke. You won't sell apples to me by putting five or 10 pounds of them into a sack that I can't see through. I used to be a trusting soul, but I've paid for too many mislabels of

Grade A and U.S. No. 1 to be trusting any more.

If I were a fruit grower, I would be very hesitant about packaging unless I could supervise the fruit all the way to the consumer's hands. It will do you no good to pack Grade A fruit in convenient packages if they are going to be improperly stored, and the housewife finds that the apples have scald or bitter pit. It won't help you if a clerk drops your sack of apples on a cement floor and says nothing about it. Just one such incident can do you a lot of damage.

When I buy apples, I buy a bushel of a specified variety and quality to can. The rest of the time I want to pick out individual apples free from bruises and with plenty of apple aroma. If there aren't any pretty apples, I look for other fruit, and if that doesn't look good, I look at canned fruit and juices. In short, when I buy perishable stuff, I don't want it to have perished before I get it.

Stoneville, Miss. Mrs. James R. Meyer

## Self-fruitful or Self-unfruitful

Dear Sirs:

In the May, 1948 issue of AMERICAN FRUIT GROWER, on page 13, is the statement that McIntosh and some other varieties of fruit are self-unfruitful. On page 19 is the suggestion that blossom-thinning sprays be used only on self-fruitful varieties, and McIntosh is included as being self-fruitful. I would like to know which statement is correct.

West Oneonta, N.Y.

R. J. Comstock

Reader Comstock will be interested to know that both statements are partly correct. In making tests with the McIntosh tree, research workers have found that when the tree is confined within a cheesecloth tent with bees inside, the variety will set a 10 percent crop without cross-pollination. This means that technically, the variety is self-fruitful. However, commercially, this crop would have little value, so the variety must be cross-pollinated to achieve a money-making crop. In this sense McIntosh is considered to be self-unfruitful.—Ed.

## Marketing from a Reader's Viewpoint

Dear Sir:

The discussion on marketing in the June issue prompts me to write and add what I consider a very important reason for the decrease in apple consumption.

There is far too much emphasis on one variety—the Red Delicious. It has been advertised to such an extent that the average person considers it the final triumph of the apple grower. While it is beautiful in appearance and, when picked ripe from the tree, is truly delicious to eat, after being in storage a short time its lack of juice and mealy texture make it a very average eating apple at best.

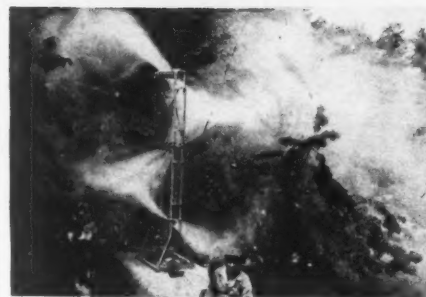
Yet millions of people after eating one out of storage, consciously or unconsciously feel disappointed because of its lack of character. The next time, they buy something else instead of an apple.

Brodhead, Wis.

Albert A. Ten Eyck

# TRAVERSE BOOMS

## THE AUTOMATIC SPRAYING UNIT



### MODEL 30 TRAVERSE SUPER BOOM

ALL TRAVERSE BOOMS ARE DESIGNED TO DO A BETTER JOB OF SPRAYING WITHOUT PROHIBITIVE COST. THERE IS A MODEL TO FIT YOUR PRESENT SPRAYER.

THE DRIVER IS THE WHOLE CREW. WITHOUT STOPPING OR LEAVING HIS SEAT HE HAS INSTANT CONTROL OVER EACH SET OF OSCILLATING NOZZLES, MAKING IT POSSIBLE FOR HIM TO SPRAY LARGE, MEDIUM, OR SMALL TREES, ALWAYS USING JUST THE RIGHT AMOUNT OF SPRAY MATERIAL.

THIS FEATURE MAKES THE TRAVERSE BOOM THE MOST ECONOMICAL SPRAYER IN USE TODAY.



### MODEL 25

OPERATOR HAS SHUT OFF ONE SIDE WHILE ROUNDING A CORNER, NO WASTED MATERIAL.

MODEL 20 IS SIMILAR IN DESIGN, FOR SMALLER PUMPS. SEE YOUR LOCAL DEALER FOR A DEMONSTRATION, OR WRITE TO

## GRAND TRAVERSE ORCHARD SUPPLY CO., INC.

TRAVERSE CITY, MICH.  
PACIFIC COAST DISTRIBUTOR  
RUEL R. STICKNEY, UKIAH, CALIF.

JULY, 1948



## AMERICAN FRUIT GROWER



TREES

like any other  
s spray equip-  
Only when a  
grower be sure  
protection.  
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tracting quality  
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always. That's  
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ARD  
ND  
DUSTS

GROWER



**"GIVES ME THE POWER I NEED  
...and saves me money, too!"**



"When I'm on this Ford Tractor, the thing I like is its power... the way it pulls... gets things done.

"When I'm checking over my bills, the thing I like is the economy of my Ford tractor... how little I pay for gas and oil and repairs.

"Yes sir, my Ford Tractor gives me surprising power, and without a lot of unnecessary weight. I like that... makes it easy to handle... means lower operating cost.

"I don't have to tell you that when you are breaking sod or discing deep, you need 'more tractor' than when you're just mowing or using a cultivator.

"That's why I like the Ford Tractor... it has the right combination of power and weight and speed for every job I do all the year 'round. To me that's the test of a tractor... how it performs in both heavy and light work. Yes sir, this tractor gives me the power I need... and saves me money too."\*

★ ★ ★

Ask your Ford Tractor dealer to show you these advantages... and the many others... of the Ford Tractor. He will gladly talk over your particular farming problems and point out the features of the Ford Tractor that will be especially valuable to you.

\*STATEMENT OF FORD TRACTOR OWNER, NAME ON REQUEST

*The only time  
that Counts  
is Working Time*



**FARM EQUIPMENT**

*See Your Dealer*

Your nearby Ford Tractor dealer is headquarters for Ford Tractors, Dearborn Implements, genuine Ford Tractor parts and for implement and tractor service second to none. Ask him for a demonstration.

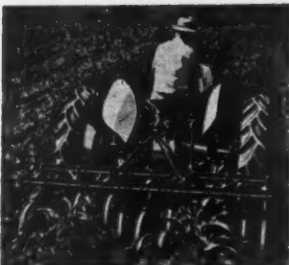
**DEARBORN MOTORS CORPORATION,  
DETROIT 3, MICHIGAN**

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**PLENTY OF POWER FOR HEAVY JOBS!**



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**Ford Farming**

**MEANS LESS WORK...  
MORE INCOME PER ACRE**

JULY, 1948

15

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A "fingertip-touch" . . . that's all that's needed to operate Farmall Touch-Control . . . the new two-way hydraulic control for International Harvester's two new tractors—Farmall Super-A and Farmall C.

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Farmall Touch-Control is convenient. Controls are centralized on the steering post where they're easy to reach. No fumbling below the seat. No turning around or reaching behind.

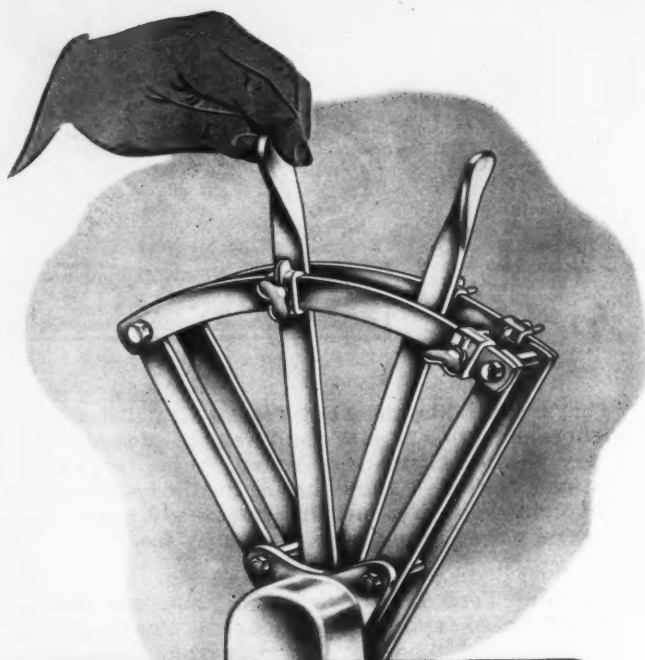
Ask the International Harvester dealer in your community for the full story about Farmall Touch-Control.

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2-pound fiberboard boxes are made to "fit the fruit," and provide a versatile and highly popular consumer package.



Mesh-bags are packed in a master container for shipment.

# FIVE-POUND BAG AND WINDOW CARTON Sell Northwest Apples

By RICHARD C. BELL

**A**FTER MANY YEARS of being "hidden under a bushel" and squeezed into boxes or barrels, King Apple is at last headed for a change of costume. Like all important fashion changes, the transition is coming slowly—mostly because of stiffer competition from other fruits and the never-ending desire of the housewife to see what she is buying and to find it in a convenient package. Slow though it may be, however, the change is coming, and it promises to revolutionize apple handling and merchandising practices from the orchard through to the kitchen refrigerator.

One new-style outfit for apples is the open-mesh bag containing 5 pounds of fruit. It was developed by Reuben Benz, Yakima, Washington, after a long period of trial and error. Mr. Benz found, after many marketing trips throughout the nation, that shoppers usually picked up pre-packed containers of fruits and vegetables.

He came home convinced that apples, too, needed a package—one small enough for the average buyer and made so that it would not hide the color of the fruit. Experiment showed the mesh bag to be an answer, and the next big job was to get the new package into stores without damaging the fruit.

At first, the 5-pound bags were packed in master burlap containers which held 10 bags each. These were then loaded into cars and placed on beds of straw. However, this shipping arrangement proved inconvenient and was satisfactory only for Winesap, a so-called hard variety. Further study developed a fir veneer box-type master container which is patterned after the orange crate and holds only eight of the 5-pound bags.

This box weighs 45 pounds net when packed with 40 pounds of apples. Thus, it weighs 3 pounds less than standard wooden boxes which

weigh about 8 pounds. This means an important saving, for at the present high freight rates, 3 pounds of wood makes mighty expensive kindling by the time it is shipped from central Washington orchards to New York City.

These veneer crates have stood the test. They can be loaded, stacked, and otherwise handled like standard boxes. Even better, fruit shipped in them usually arrives on markets in perfect condition because apples put up this way do not show the results of a lid being squeezed down on them as is sometimes true when wooden boxes are packed to bulge, then squeezed down with a lidding machine.

Another obvious advantage favoring the mesh bags is their convenience for ready display in stores. Nearly every apple is visible, so the consumer is no longer "buying a pig in a poke"—the apples are in plain sight for inspection.

Growers usually profit from this pack by receiving higher net prices. In bags, all apples 2½ inches and larger can be used without the price being affected. However, if these same apples were put up in boxes, the presence of the unusually large ones and the small ones would necessitate a discount on the price. Packing costs are practically the same as for standard wooden boxes. Benz expects to market about 100 carloads of mesh bag-packed apples this season, and will use all popular varieties such as Jonathan, Delicious, and Winesap.

"It looks like these bags are about  
(Continued on page 28)

JULY, 1948

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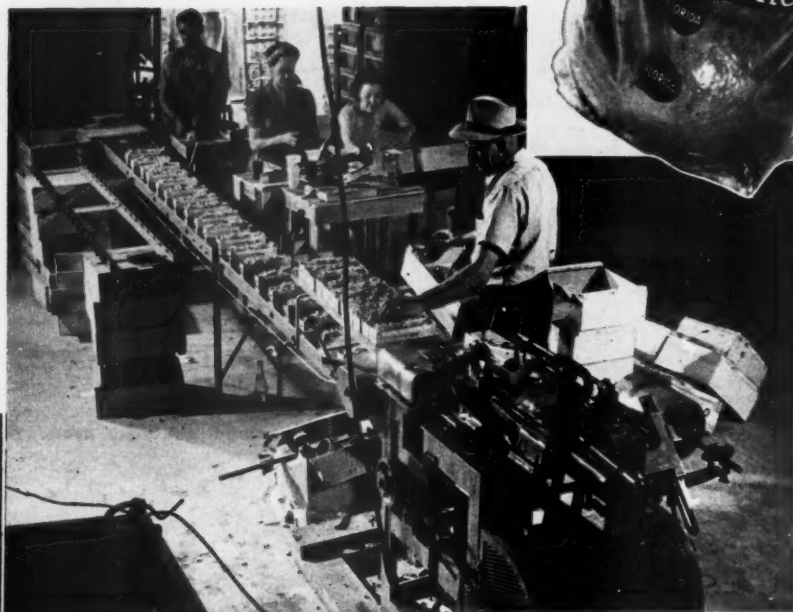


# PREPACKAGING

**Grower Experience Shows Consumer Packages Speed Fruit Sales, Cut Out Waste**

**W**HAT IS THIS "prepackaging" that everyone talks about these days? It is the packaging of consumer goods, such as fruit, in a consumer-type container at the point of origin—a package that the housewife who does the buying can inspect, pick up, and carry home with a minimum of effort.

Why such interest in prepackaging? Because experiments prove that a handy, fancy wrap increases sales through its eye appeal, and because, in view of this fact, self-service stores are anxious to add fresh fruit to their



Prepackaging grapes is a profitable operation for the Kolting Bros. of Indio, Calif. Volume production keeps down overhead.



COURTESY CHASE BAG CO.



Display of prepacked western apples.

self-serve counters. This is important, since a survey shows that 78 percent of food sales among independent retailers is self service. Besides, waste is reduced to a minimum when fruit is wrapped so that it is protected from

the air and from the pinches of the housewife. If the grocer buys prepackaged fruit in quantities that will move quickly, there is no waste at all.

In favor of prepackaging in general, J. W. Farnsworth, of the Willard Farnsworth orchards in Waterville, Ohio, says that it has increased his company's sales by 25 percent, and that they find where packaged apples and bulk apples are sold side by side, the sales will run 10 to one in favor of the prepackaged fruit.

Consumer-type packages fall into

three main groups: baskets, bags, and cartons, and these are made of a variety of materials. Outstanding among these containers are the mesh bag, transparent film bag, the window carton, and the corrugated paper basket.

Of all the units, the 5-pound container seems to be the most acceptable to the consumer, and one of the very popular of these is the 5-pound mesh bag. The Treesdale Farms, Inc. of Mars, Pa., were the first to use this pack in Pennsylvania, and Francis G. and Raymond F. Reiter, who man-



Overwrapped cartons containing Maine apples.

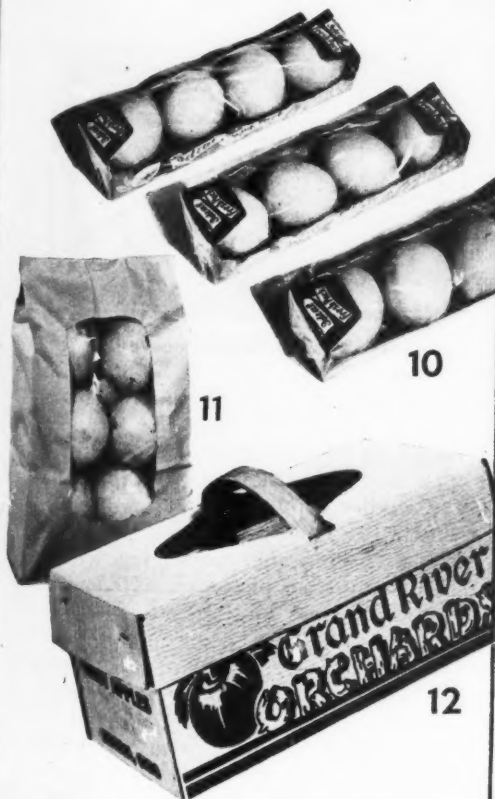
Above left—Mesh bag holds full box of grapefruit.

AMERICAN FRUIT GROWER

age the Farms, find this type of bag profitable even though it costs more per bushel of fruit than the usual bushel basket pack. They have found that this pack increases their sales, permits the use of small-sized apples to regulate the weight, and encourages greater apple consumption than the 2- and 3-pound units of the old merchandising methods. They have found that a red, firm variety apple of U. S. No. 1 grade should be used, and that red apples show up particularly well in bags of a purple mesh. Varieties which have proved good for this pack are Cortland, Jonathan, Stayman, Rome Beauty, Red Rome, and Wealthy. Of course, this bag gives almost complete visibility of fruit, and it has proved to have considerable eye appeal.

In Florida the mesh bag has been used extensively for oranges, but for this fruit, the 8-pound size has been proved the best. A newer, 20-pound unit has also been used with some success.

There are some disadvantages to the mesh bag, chief of which is that it gives no protection against bruising and does not protect its contents from the air. The mesh itself sometimes causes bruising or scoring of the



**1** Plums or apricots are sold in 1½ lb. package by the Gindick-Whitestone Co.

**2** This smart Lumarith-wrapped package protects pears, lets them "breathe."

**3** Here is a package designed by Franklin Gindick to hold six western apples.

**4** This pack will sell 10 times as fast as bulk fruit, says Willard Farnsworth.

**5** LST Cellophane is permeable and helps keep fruit fresh. Pack holds 8 peaches.

**6** Here is a Pliofilm wrap for apples. No refrigeration needed for this pack.

**7** The Packette holds 12 apples, and is "tailor made" for any size fruit.

**8** The eight-pound mesh bag has proved to be most popular size for oranges.

**9** The film bag is completely transparent. This is a real advantage in selling.

**10** Lemons are sensitive to excessive carbon dioxide. Lumarith wrap is safe.

**11** This window bag is made of wet-strength paper which is not weakened by moisture.

**12** Protection from bruising is the main advantage of the corrugated paper basket.

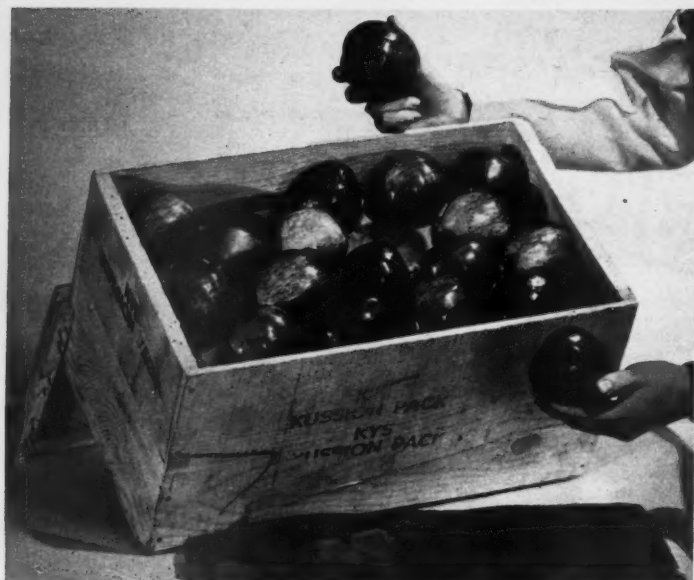
fruit's surface when the bags are stacked for shipping or display. Grower Morris Rees, of Topeka, Kans., says, "I would recommend that all apple growers try the mesh bag, but I make this suggestion: do not let grocers over-stock the second time they buy from you. When this hap-

pens, the fruit does not move rapidly enough, deteriorates, and the pack gets a bad name." Many growers have found that bruising of fruit can be kept to a minimum if the mesh bags are packed about six or eight in a crate for shipment instead of piling them loose in cars or trucks.

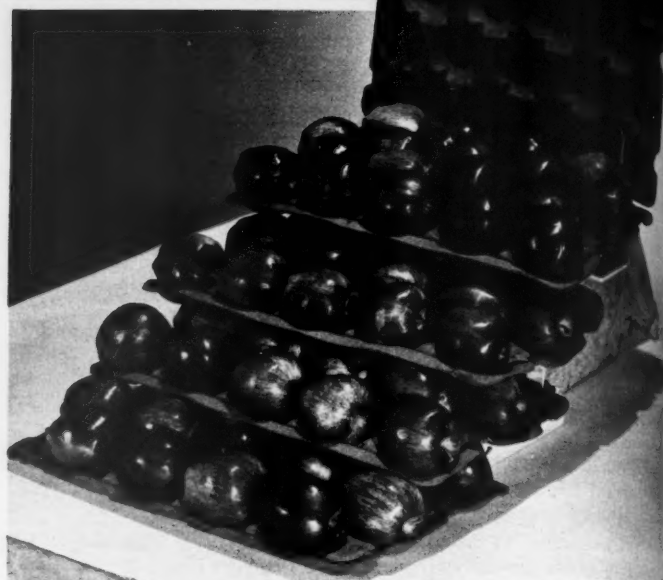
Michigan fruit growers have officially adopted the 5-pound purple mesh bag as a suitable container for red apples, and a green mesh bag for yellow apples. They have recommended that master containers be developed which will hold eight 5-pound bags. There are undoubtedly problems to be met, but apple growers are generally enthusiastic about the possibilities of the mesh bag.

(Continued on page 30)





Filled trays of this pack are piled one on the other, then placed in wooden boxes for transportation.



The tray pack prevents apple bruising, is easy to ship, and is convenient for making attractive store displays.

# NORTHWEST STUDIES APPLE PACK IMPROVEMENT

*A Bruise-free Pack Helps Build Good Reputation*

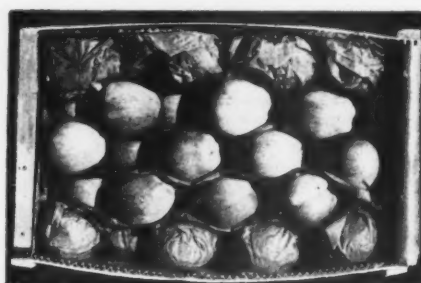
By EARL W. CARLSEN, Washington State Apple Commission

**P**ACIFIC NORTHWEST apples are known throughout the world for their high quality. This reputation has been achieved largely on a basis of a superior package that has long been used in the industry. Years ago, before there were many apple growers in the Northwest, the fact was recognized that special problems had to be met. The long distance from market required better packing and better grading; and there was a lack of basket veneer, although lumber for boxes was plentiful. Necessity being the mother of invention, the industry was forced into improved apple packing which has since been copied in other apple growing areas.

Despite the success the industry has had in the use of the Northwest box pack, new problems are arising, giving indications at present that improvements will be made. This desire for improvement is not sudden or new. It goes back beyond the force of wartime pressures when the industry improvised in order to overcome labor shortage handicaps. It started 20 or 30 years ago with self-service merchandising and has grown steadily since.

A consumer who has the privilege of selecting apples on display almost invariably picks up the ones with the highest color and the fewest bruises and surface blemishes. As one grower has written, "Consumers are the best

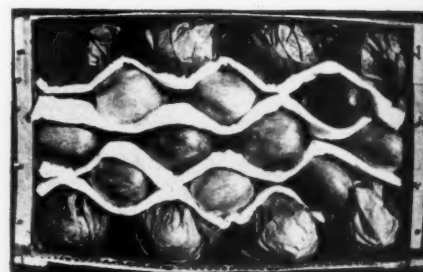
apple sorters I have ever seen." Under a clerk-service system the amount of spoilage of apples tends to be reduced because slightly bruised apples and low-colored apples are moved out as they are unpacked. The consumer with the choice of picking out the fruit lays the slight bruise aside; the slight bruise gradually becomes larger and breaks down until the fruit finally



Crepe wadding layer pads used here.

must be removed from the display as waste. Retailers, in trying to cut down their costs of operation and the margin of selling, find this spoilage one of their big items and are seeking to purchase the pack that gives the smallest quantity of damaged fruit.

In a survey made a year ago, the Washington State apple industry found 98 percent of the retailers indicating that bruising was the biggest problem the industry faced. These



Layer pads of confetti newsprint.

same retailers, once familiar with a type of pack that had few bruised fruits in it, almost always indicated that they would like to buy more often.

Another stimulant prodding the industry to new investigations is the trend to consumer packaging which is just another phase of self-service merchandising. This trend is so definite that it is not being ignored by apple packers, for many of them recognize that eventually a sizeable portion of our fruit may be sold in that way. But many who recognize this rise to prominence of consumer-packaged apples feel that the pre-packaging logically will be done in the terminal markets rather than at the shipping point. Whether it is done one place or another, it poses new problems. If done in terminal markets, prepackaging will require the shipment of apples in as good condition

(Continued on page 31)

AMERICAN FRUIT GROWER



# TESTS WITH PEACH CONTAINERS

**T**HE SEARCH for a new, better, and less expensive package for peaches has stimulated the testing of many different types of containers. The emphasis on delivering to the Housewife tree-ripened peaches (as reported in August, 1946, *AMERICAN FRUIT GROWER*) has added incentive to the search for a package which will reduce the possibilities of damaging the easily bruised, fragile peach.

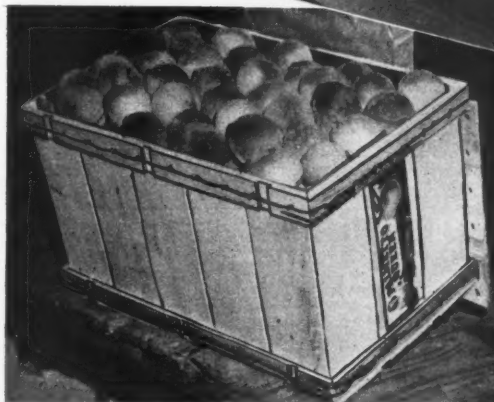
## Spartan Box and Bushel Basket

At a recent meeting of the National Peach Council it was pointed out that approximately 90 percent of the peaches packed east of the Mississippi River go to market in bushel baskets. According to C. L. Burkholder of the Purdue Agricultural Experiment Station, the much used bushel basket, as well as the packing accessories used with it, should and can be improved. This is especially true since no substitute for the standard bushel has been developed which warrants general recommendation. Tests have shown that ventilated baskets decrease the possibility of brown rot and increase the life of peaches by allowing them to cool much more rapidly. Burkholder suggests the use of the export tub with ventilated bottom and side vents which average  $\frac{1}{2}$ -inch in width. A basket manufacturer will provide growers this year with such a container and, in Burkholder's words, "This is something of which smart peach growers and shippers in carlots should take advantage in 1948."

In South Carolina, Mr. Troy Cribb, manager of the South Carolina Peach Growers Association, points out that the Spartan box is superior to the bushel basket. "The Spartan box loads well, refrigerates well, carries with little breakage in transit, and delivers peaches with less bruising than the average bushel basket," says Mr. Cribb. "Principal drawback of the Spartan box is that it is not well received by the wholesale trade since the package was made to pack semi-flat and when opened has the appearance of being slack despite the fact that it contains an amount equal to the bushel basket."

Experiments in Indiana also have shown that the Spartan box brings fruit to market with less bruising but meets strong consumer resistance unless the fruit is emptied from the package and sold by the pound. However, reports from New Jersey say

**The Spartan box, Los Angeles lug, and corrugated box all have advantages, but the bushel basket is still the most widely used.**



Above—Spartan box is a wirebound container. Top right—Packing the Los Angeles lug.



The much used bushel basket (shown above) is improved by using a ventilated export tub.

"the Spartan box looked good on the outside when it reached the commission house, and it was popular with tradesmen."

Some investigators feel that neither the Spartan box nor the bushel basket is suitable for shipping firm-ripe peaches since the weight of the fruit in such large containers will bruise the bottom layers. This is confirmed by Charles W. Hauck of Ohio State



Cell-type containers give good results if peaches fit properly, but are expensive.

University, who discovered in experimental shipments of firm-ripe to tree-ripe peaches that the Spartan box, although superior to the bushel basket, still allowed 20 percent bruising and cannot be considered as solving the problem with complete satisfaction.

## Cell-Type Containers

In New Jersey, under the supervision of Joseph F. Hauck, extension marketing specialist, tests by the Beverly Co-operative Growers Association showed the cell-type corrugated container is best suited for shipping firm-ripe peaches. However, drawbacks with this type of container were lack of ventilation, and bulging and sagging in some containers.

(Continued on page 24)

# what's NEW for the FRUIT GROWER

**1** Airospray rig, made by Robinson Fan Corp., an air-blast sprayer, insures complete coverage with safety and economy.

**2** The U. S. Tractor Corp. announces a new smaller-sized crawler-type tractor, which is only 3 feet wide and 7 1/2 feet long.

**3** St. Regis Paper Co.'s new Citrobag is a multiwall paper bag which is specially treated to prevent deterioration.

**4** For weighing and handling fruit, the Exact Weight Scale Co. has developed a fruit and vegetable bagging scale.

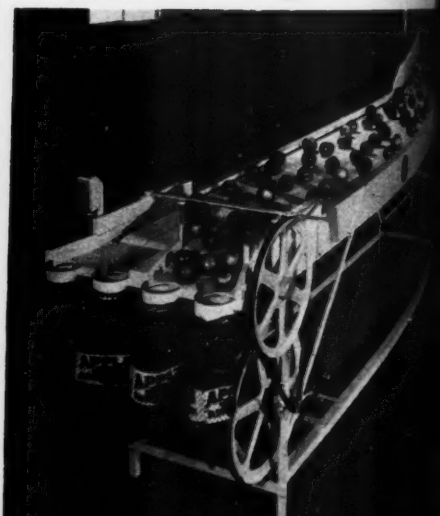
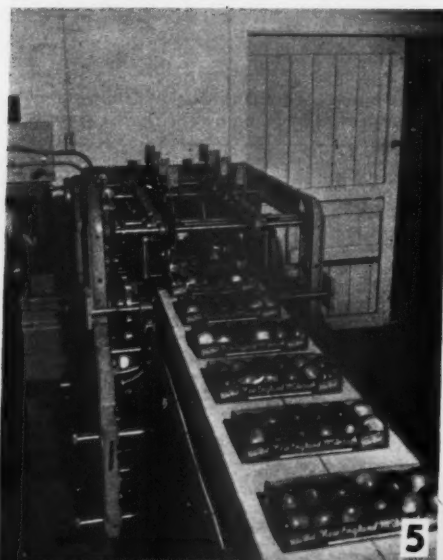
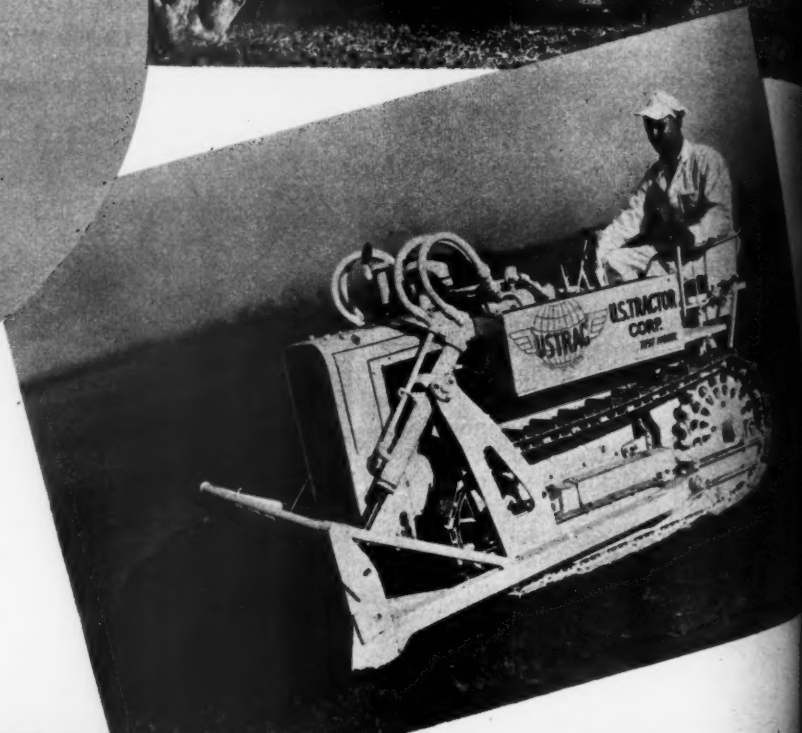
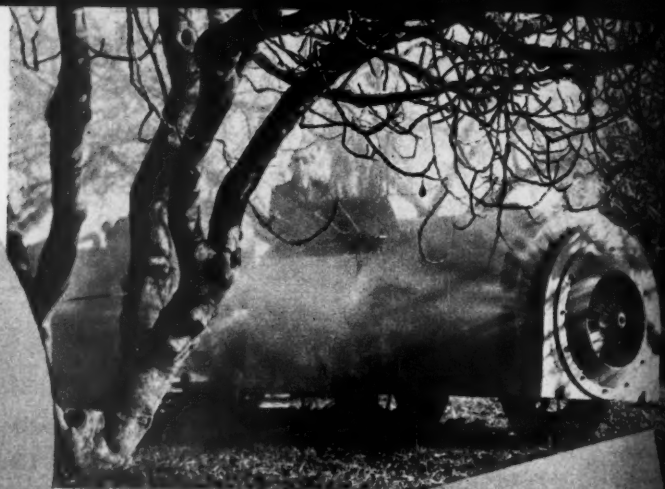
**5** Package Machinery's new automatic packager handles 35 to 60 cello-wrapped cartons of apples in one minute.

**6** Tautz Manufacturing Co. produces this new assorting and packing belt for bagging many fruits throughout season.

**7** Revolutionary is this Allis-Chalmers tractor with its motor in the back and companion implements on the front.

**8** Clayton-Dickinson's spray gun turret stops kick-back on high pressure rigs. Remove one pin and turret folds out of way.

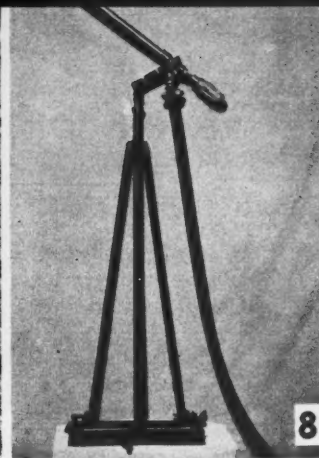
**9** The addition of a spray attachment to the Cunningham mower makes it possible to spray weeds directly after cutting.







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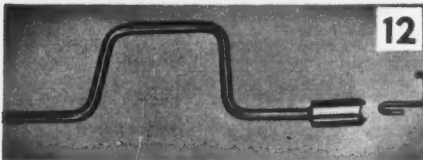
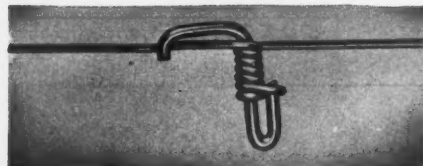
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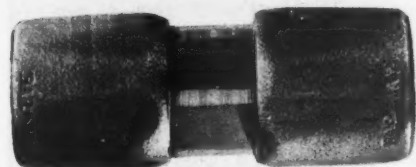
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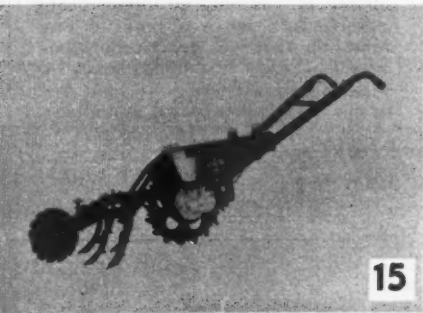
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Complete information on any new products in which you may be interested may be obtained by writing to Editorial Department, American Fruit Grower Magazine, 1370 Ontario Street, Cleveland 13, Ohio.

**10** A tight skin of Goodyear Pliofilm is applied to oranges to preserve tree freshness, reduce weight loss and spoilage.

**11** Extend-O-Veyor, a portable-type conveyor, extends 46 feet in either direction. Mfg. by Standard Conveyor.

**12** Burkroy Products developed a One-Man Fence Tightener to cut costs and work involved in fence-building.

**13** Streamlined, remountable, full flow —these are the features of Bar-Way High Pressure Spray Hose Couplings.

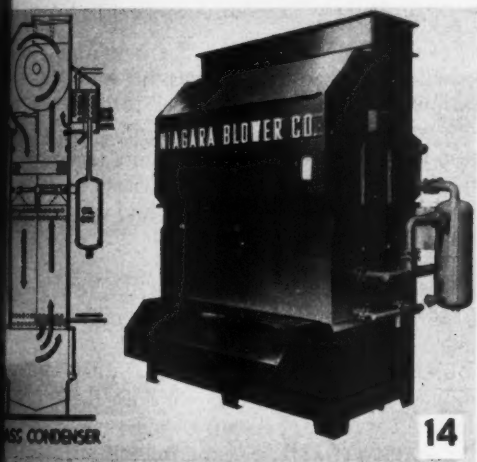
**14** Improved design of the Niagara Aeropass Condenser, for refrigerating plants, is announced by the manufacturer.

**15** Called back by popular demand is the Gravely Model D Tractor featuring a single wheel and a front tool hitch.

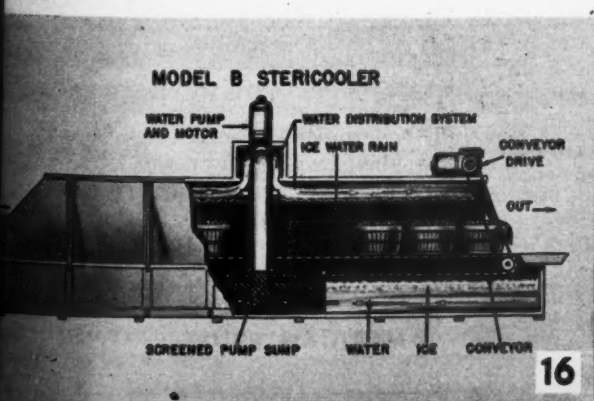
**16** The new Bean Stericooler combines pre-cooling with sterilization to assure better shipments of perishable fruits.

**17** Adjustable table and movable stop characterize the Tipp Power Freight Ladder made by Triangle Equipment Co.

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# NUT GROWERS NEWS

## A Method of Budding Walnuts

**J**ULY AND AUGUST are the principal months in which walnut varieties are propagated by budding. At this time of the year, many members of the Northern Nut Growers Association, Inc., will be busy among their young seedling trees of black walnut, changing them over to some of the better black walnut varieties, to Persian (English) walnuts, or to the Asiatic "heartnut" varieties which resemble butternuts in flavor but are much easier to get out of their shells. Most of them will probably use the patch budding method, which is the most popular in both walnut and pecan budding. (Patch budding is described and illustrated in USDA Farmers' Bulletin No. 1501, "Nut-Tree Propagation.") The patch budding method, however, has not been successful with walnuts in some localities, particularly in the more northern states. For trial in those areas, we present a modified T budding method as described at the 1947 NNGA Convention by H. Lynn Tuttle of eastern Washington.

Mr. Tuttle had previously tried most of the accepted methods of walnut propagation, and in his own words, "The results were surprisingly uniform—the sap soured." Then one summer he decided to try a T or shield bud, with provision for drainage of the excess sap.

He continues, "It was quite late in the season, but I set a dozen Schaffer walnut buds on eastern black walnut stocks. These buds had drainage. The vertical cut of the T extended at least two inches below the bud. They grew successfully. The following spring we budded as soon as the bark would slip and continued at intervals all summer. Results were good. Some of the steps we now use are probably not essential but there are two points that cannot be over-emphasized; namely, drainage and contact. The complete method is as follows: 1. Trim bud sticks to leave one inch of petiole on the bud. 2. Make the T cut with a long vertical slash that will extend at least an inch below the bottom of the bud. 3. Cut the bud-piece long and deep and peel it from the wood by pinching the sides. Be careful not to injure the bark just below the bud. 4. Insert the bud either flush with, or below, the cross-cut. 5. Wrap with large-sized rubber bud-

(Continued on page 33)

## PEACH CONTAINERS

(Continued from page 21)

Experience in South Carolina indicates the cell-type containers carry firm-ripe peaches with practically no bruising if the peach fits the cell. In Michigan, studies carried on by T. A. Merrill, H. P. Gaston, and H. A. Cardinell over a three-year period have shown that the cell pack carries the fruit to market in excellent condition and that the cells can be filled just as rapidly as can bushel baskets, provided the bulk of the fruit being handled is of uniform size, color, and degree of ripeness. In 1946, however, the small size and uneven ripening caused this type of package to be a failure. In Louisiana, the cell-type containers developed quite a few bruises when the peaches packed were

packed in as near a tree-ripe condition as possible, showed the Los Angeles lug to be the most desirable package. The test graded the containers equally on seven essential factors. The Louisiana report concluded that, at the present time, neither Louisiana growers nor wholesalers are prepared to pack or accept shipments of peaches in these boxes.

In California, Grant Merrill, shipper of North Gold brand peaches and vice-president of the National Peach Council, reports that for shipments of less than 1000 miles the Los Angeles lug or a modification of it is used almost exclusively. In this container peaches are packed in two layers only which produces fewer bruises in shipment. The lug is 17½ x 14 inches outside and 5¾ inches deep inside, usually with a ¾ inch cleat on the ends, making 6½ inches overall. For smaller peaches of 2½- to 2¾-inch size, a 4¾- or 5¼-inch lug is often used.

However, Merrill points out, "The important thing about our western containers is not the container itself but that, first, peaches are individually and carefully handled, and second, the peaches are only two layers deep. Every peach is selected by the packer for quality and correct size. For these nearby markets we have the peaches at such high maturity that we cannot use machines, sorting belts, sizers, or defuzzers."

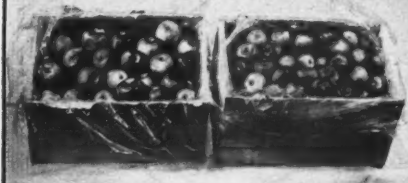
Mr. Merrill goes on to say, "About ten years ago we started the use of shredded paper between the layers. This paper, which is a fine grade of shredded bleached news, acts as a cushion and also prevents rolling or shifting of the peaches if the pack slackens a little."

The Colorado wooden flat box for peaches has enjoyed a successful reputation for many years. Carl Jorgensen of the Colorado Experiment Station has shown in trial shipments that firm-ripe peaches can be carried to market in excellent condition and with improved market movement.

### Make Needs Felt

It is evident from the foregoing discussion that a successful peach container must fit a long list of requirements, and requirements vary for different localities. Every peach grower would do well to acquaint himself with the newer types of containers as well as with the preferences of the trade with which he deals. Growers who make their needs heard to box and basket manufacturers, to state and government research agencies, and to their own peach grower associations will be doing their part to help stimulate the evolution of a satisfactory peach package designed for the delivery of tree-ripe or firm-ripe peaches.

## YEAR-AROUND FRESHNESS



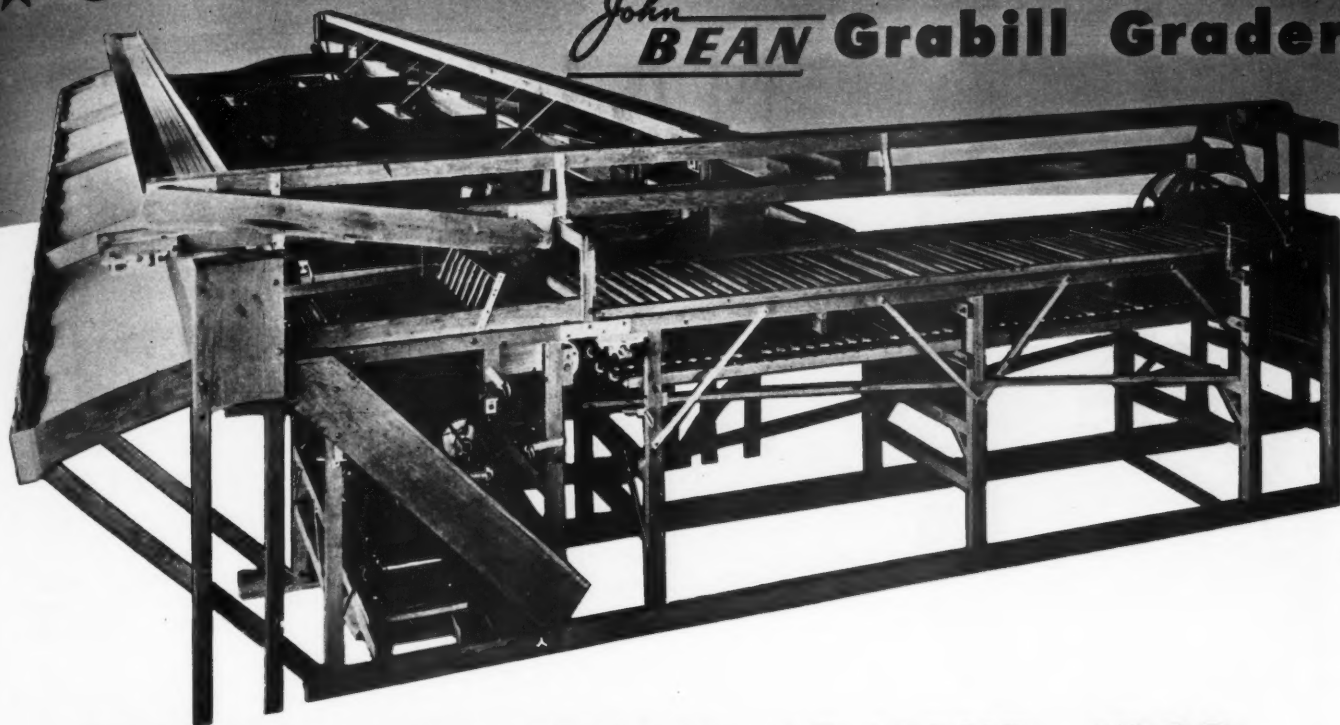
Almost year-around orchard freshness of apples is now possible for growers who use Pliofilm liners in their storage cases, according to results of recent tests made at Iowa State College. The tests showed that fruit from the film-lined boxes maintained its ripeness and color at desirable levels for three months longer than fruit stored in the usual, unlined boxes. When kept in the lined cases, at a temperature of 36° with a humidity of 86 percent, the weight loss was reduced from one half to one quarter of normal, and shrivelling was reduced almost completely. Soft rot was reduced and Jonathan spot was practically eliminated in the film-lined boxes of Washington and West Virginia Delicious apples and Iowa Jonathans.

a little too small for the cells. In South Carolina, cells adapted to the Spartan box proved more satisfactory than cells adapted to the corrugated box for both express and carlot shipments. Chief drawback to the cell-type package is the extra cost needed for package, fillers, and labor. And, as Mr. Troy Cribb points out, the extra expense plus the great number of different size cells required would make this type package prohibitive for any large commercial operation.

### Los Angeles Tomato Lug

A report by D. C. Alderman of Louisiana State University on six different types of packages for peaches,

# ★ STAR PERFORMANCE by *John* **BEAN** Grabill Graders



## PROTECT THE CREAM OF YOUR CROP



There's a John Bean high pressure power sprayer that's built to fit your orchard. Complete range of capacities and types to meet all needs for thorough fast coverage.

The *Speed Sprayer* is everything its name implies. You cover extra acres every day at lower cost and with less labor. Protection is assured because the entire tree is enveloped in a solid bank of spray fog.



Automatic spray masts cut labor cost by as much as 60%. These John Bean masts are gun equipped so that you get better top center coverage than with hand methods. Now available in 4-, and 8-gun automatic, and 7-gun semi-automatic models.

Sta-Fresh applicators blend the wax with the natural wax of the skin. Moisture and rich flavor are sealed in, and appearance of the fruit is improved and maintained. Sta-Fresh keeps apples and pears orchard fresh longer.

JOHN BEAN GRABILL GRADERS protect the cream of the crop by gently lifting the largest fruit out first. Fancy, or other sizes of quality fruit are not dropped on moving belts or tables, but are carefully lifted by sizing bars and carried to separate bins.

The John Bean Grabill Grader is adapted for basket, barrel or box packing, and can be used for peaches as well as for apples with only slight change. They are one part of the complete line of John Bean packing house equipment which also includes washers, cleaners, Stericoolers, and Sta-Fresh applicators. This equipment is your profit protection from tree to market. It is moderate in cost, economical in operation. Modern engineering and design plus sturdy construction keep operating costs down and boosts the market value of your crop.

See your John Bean dealer, or write for complete information and free catalogs.

### JOHN BEAN

DIVISION OF FOOD MACHINERY CORPORATION

LANSING 4  
MICHIGAN



SAN JOSE  
CALIFORNIA

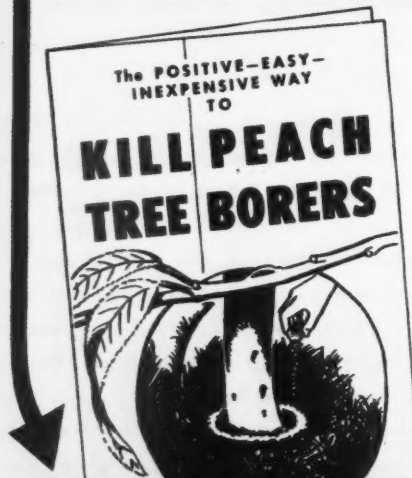
JULY, 1948

25



# KILL Peach Tree Borers

Pure Para-dichlorobenzene is strongly recommended by the U. S. Department of Agriculture for killing peach tree borers. Fill in and mail coupon for our folder on the use of SOLVAY Para-dichlorobenzene in killing peach tree borers. Gives full details of how to use this effective insecticide for best results.



**SOLVAY**  
PARA-DICHLOROBENZENE

## SOLVAY SALES DIVISION

Allied Chemical & Dye Corporation  
40 Rector Street, New York 6, N. Y.  
Please send me, without obligation, your free folder on the use of SOLVAY Para-dichlorobenzene in killing peach tree borers.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ AF7

## NAI SIZES UP MARKET OUTLOOK

IN the 14 years of its existence, National Apple Institute has done an efficient job serving as the Washington voice for the industry and promoting a sound national program for all apple growers. Last month at Harrisburg, the Institute held one of its most successful annual meetings when delegates from 21 apple producing states focused their attention on problems in marketing this season's apple crop.

First day's business "guesstimated" the size of this season's apple crop at 101 million bushels—approximately 11 million bushels less than last year. Of this total, delegates estimated that 28.8 million bushels may be processed, leaving 67.4 million bushels for fresh sale and for export. Last season 30.3 million bushels were processed, 72 million bushels sold fresh, and 2.2 million exported.

The outlook for processing was examined closely and, according to M. E. Knouse, National Fruit Products Co., the carryover this year of canned apple sauce and slices will be approximately 25 percent of the supply necessary for 1948-49. Knouse, himself a large canner and grower, felt that this year canners would process close to the amount canned last year. Knouse recommended a three point plan to apple growers to improve processing outlets: 1) Make available better quality fruit to processors whose packs have shown wide variances in quality; 2) Stabilize apple prices to canners to discourage price cutting competition among processors; and 3) Support organized plans of promotion for processed apples.

The export market, traditionally a big factor, received considerable discussion. Average pre-war exports



## APPLE GROWER OF THE YEAR

Henry W. Miller, Paw Paw, W. Va., (above) retiring president, received NAI's annual award for most valuable contribution.

were 10 million bushels; this past season less than three million were exported, the largest buyer being the Republic of the Philippines. No "guesstimate" of what will be exported was made although it was hoped that shipments to Europe, under the European Recovery Program would provide a substantial outlet.

In an effort to stimulate closer grading, delegates unanimously passed a resolution introduced by Lester Arnold of Winchester, Va. The resolution placed the Institute on record as strongly urging the State Departments of Agriculture to enforce state grading laws. A second resolution introduced by Carroll Miller of Martinsburg, W. Va., urged that a program of search for a lower-priced and more efficient package be established under the Research and Marketing Act.

Final business of the meeting was acceptance of the invitation of the Michigan Apple Institute to meet in Michigan next year and approval of a motion to appoint a committee to study ways and means of establishing a survey of apple trees by age and varieties.

Four busloads of delegates toured parts of the four-state area of Pennsylvania, Maryland, West Virginia, and Virginia following the meeting.



Shown at the banquet table is John Chandler, Sterling Junction, Mass. (right), new president, with W. G. Martin, Wapato, Wash. (left), Sheldon Funk, Boyertown, Pa., and H. W. Miller. Other officers elected were C. C. Taylor, Albion, Mich., vice-pres.; Malcolm Brown, Martinsburg, W. Va., secy.; and C. E. Dutton, Milford Center, Ohio, treat.

AMERICAN FRUIT GROWER





## For More Fruit...Finer Finish

Better finish and higher yield . . . that's what you can expect from Du Pont fungicides, because they give you a better kind of disease control. They prevent fungous infections, of course. They also give your trees a boost because they don't stunt foliage or injure the fruit.

Look at these outstanding advantages:

**For apples and pears:** "Fermate" fungicide prevents scab, rust, bitter rot, sooty blotch and other fungous diseases. Cover sprays in summer heat do not burn foliage or fruit when you use "Fermate." And the trees keep their vigorous foliage through the season. Fruits grow larger and take on a quality finish, with less russetting.

**Peaches and plums:** You get exceptional control of brown rot with "Fermate." For pre-harvest applications on peaches and light-colored plums, Du Pont "Zerlate" is excellent, as its light-color residue does not show, yet protects the fruit through shipment.

**Cherries:** Trees keep their healthy foliage through

the growing season when you control leaf spot with "Fermate." It is also effective against brown rot. On sour cherries, Du Pont Copper-A Fixed Copper with lime is effective.

**Grapes:** Black-rot control with "Fermate" is outstanding. Growers report the foliage stays green longer, produces higher yields of sweeter grapes.

**Other fruits:** You can depend on "Fermate" to help you keep many other fruit crops growing thriftily while it controls diseases such as cranberry fruit rots, currant leaf spot, raspberry anthracnose and cane blight.

"PARMONE" stops fruit drop, improves color, quality, yield of marketable fruit. Effective, safe, readily applied as dust or spray.

**KILL POISON IVY** with one application of Du Pont "Ammate" Weed Killer. Destroys roots and tops . . . no regrowth. Also for chokecherry, sumac, other tough weeds and brush.

**SEE YOUR DEALER NOW** for these Du Pont fungicides and other pest control products. Or write to Du Pont, Grasselli Chemicals Dept., Wilmington 98, Del.

**DU PONT INSECTICIDES:** DEENATE\* DDT, LEXONE\* and MARLATE\* Insecticides, KRENITE\* Dinitro Spray, LORO\* Contact Insecticide, Cotton Dust No. 10, Cryolite, Lead Arsenate, Calcium Arsenate, Nicotine Products, Lime Sulfur, Phenothiazine-Lead Arsenate Mixture, Paris Green.

**DU PONT FUNGICIDES:** ZERLATE\*, FERMATE\*, and PARZATE\* Organic Fungicides, COPPER-A Fixed Copper, SULFORON\* and SULFORON\*-X Wettable Sulfurs, Sulfur Paste, KRENITE\* Dinitro Spray, Bordeaux Mixture.

**OTHER DU PONT MATERIALS:** 2,4-D WEED KILLERS, AMMATE\* Weed Killer, Du Pont Spreader-Sticker, PARMONE\* Pre-Harvest Fruit Drop Inhibitor, Spray Adhesive.

\* Reg. Trade Mark of E. I. du Pont de Nemours & Co. (Inc.)



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BETTER THINGS FOR BETTER LIVING  
... THROUGH CHEMISTRY

## CHASE SAXOLIN

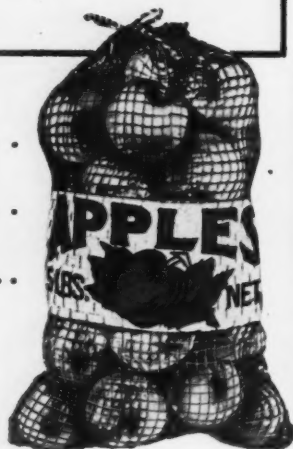
CONSUMER SIZE

OPEN MESH APPLE BAGS

5 lbs. . . .

8 lbs. . . .

10 lbs. . . .



Chase Saxolin open mesh apple bags are now available! The bag that displays your product to the best advantage and promotes quick, profitable sales.

FILL OUT AND MAIL THE COUPON BELOW FOR SAMPLE BAGS AND PRICES

CHASE BAG CO.,  
309 W. Jackson Blvd., Chicago 6, Ill.

We are interested in Saxolin apple bags of colors and sizes checked:

SIZE: 5 lbs. . . . 8 lbs. . . . 10 lbs. . . .

COLOR: Purple . . . . . Tangerine . . . . .

Please send samples of

SIZE . . . . . COLOR . . . . .

NAME . . . . .

ADDRESS . . . . .  
Please print



## CHASE BAG CO.

GENERAL SALES OFFICES

309 WEST JACKSON BLVD., CHICAGO 6, ILL.

BOISE • BUFFALO • CHAGRIN FALLS • CLEVELAND • CROSSETT, ARK. • DALLAS • DENVER • DETROIT • GOSHEN, IND. • HARLINGEN, TEXAS • HUTCHINSON, KANS. • KANSAS CITY • LOS ANGELES • MEMPHIS • MILWAUKEE • MINNEAPOLIS • NEW ORLEANS • NEW YORK • OKLAHOMA CITY • ORLANDO FLA. • PHILADELPHIA • PITTSBURGH • PORTLAND, ORE. • REIDSVILLE, N. C. • ST. LOUIS • SALT LAKE CITY • TOLEDO

## FIVE-POUND BAG

(Continued from page 17)

the best thing that has been developed for our industry in recent years," said A. J. White, a member of the Growers' Association. "Just to do away with the bruising that apples sometimes get when pressed in boxes is enough to cast my vote for the bags."

Many other consumer packs have been tried in the Northwest, the most notable of which is a fiberboard box which is handled by Gilbert F. O'Brien and K. J. Boender of Wenatchee, Washington. Theirs is a package made to fit apples of any size and to get the fruit to consumers in the same fine condition as when they leave the trees.

"Our package does all the retailer's work in marketing apples," says Boender. "We can pack tree-ripened fruit—even Jonathans—send them to the eastern seaboard, and they will arrive just like they left the warehouse. They will not contain as much as 40 percent bruised fruit as sometimes happens with standard wooden boxes."

Their box package is 9 inches long by 6 inches wide and 2¾ inches deep. It holds all from the smallest apples up to size 80, with 2 pounds net to the box, although one which contains 5 pounds of fruit is now being developed. The consumer packs are shipped in fiberboard cases holding 20 boxes each, or 40 pounds net of apples. These are packed 750 cases to the carload.

Each box has a ½-inch indentation at the bottom, leaving 2¼ inches and the "bulge" for apples. This bulge, in turn, fits into the ½-inch depression of the box which is stacked above. This method prevents all bruising. Once the apples are inside these small packages, a layer of cardboard for the bottom is stapled against them so they fit snugly and cannot hit one another to bruise. They are packed so tightly they will not fall out even when the open-face box is turned upside down. Every apple can be seen by the purchaser.

The cartons are so firm—even though made of fiberboard—that a 175-pound man can stand on one without damaging the fruit. Each box also serves as an advertising piece. They are prominently labeled "Washington State Apples," and because only top-quality fruit is used, O'Brien and Boender claim that each of the 1,500 consumer packages in a carload carries an advertising message directly into as many kitchens.

"Apples in these packs retain their crispness because they are in two insulated containers—first the consumer box, and then in a larger one used for shipment," Boender testifies.

"By the same token they will keep from freezing during transit in cold weather."

Costs for this pack are slightly higher than standard wraps, but the quality makes up the difference and brings repeat orders. The two men expect to market 200 carloads of their consumer packages this season.

## Two Hundred Years Old



This pecan tree is older than the Declaration of Independence—almost 200 years old! And it is one of the largest top-worked pecan trees in the United States. Nine hundred grafts have been made on the tree, and it has 1400 buds in it. Ten years after it was top-worked, it bore 1000 Mahan nuts. The tree is an old landmark in Texas and stands on the W. L. Mann Farm at Georgetown.

O'Brien's first experience was with McIntosh apples in Massachusetts. Using New York City as the guinea pig, he increased the sale of this pack from one small truckload in the early 1930's to 142 carloads in 1943—the last season in which extra quality could bring a premium before OPA price regulations went into effect.

Most of this volume increase came during depression years when consumers were unusually price conscious, but still were willing to pay the extra premium for quality fruit in a handy package.


When price ceilings eliminated the quality markets, O'Brien served as OPA price executive in charge of the fresh fruit and vegetable division in Washington, D.C.

"But consumers are again quality conscious, and willing to pay for a better product," says O'Brien.

"I find our business is much like the hardware dealer selling dishpans. If one becomes dented, the buyer wants it for less money. Apples are just the same. If they are bruised, consumers feel that the fruit should be sold at a discount; otherwise, they are not interested in buying."

(Continued on page 35)

AMERICAN FRUIT GROWER



# WHY A PENCO<sup>\*</sup> PROGRAM is a basic program

Here's a thorough-going insecticide program developed especially for fruit growers by Pennsalt—makers of Penco products. Pennsalt produces chemicals that go into Penco products right from the ground up—giving you high quality, superior results and low prices. Use this Penco program for effective control and bigger fruit profits.

**For worm control: PENCO WB-50<sup>\*</sup> with 50% DDT**

This DDT spray contains superior spreaders and stickers for better coverage and reduced run-off. Micron-sized for better suspension.

**KRYOCIDE<sup>\*</sup> Natural Cryolite**

This famous cryolite insecticide has been a leader for 16 years. It will not sterilize soil, upset natural insect balance, nor harm tender foliage or fruit. Not acutely toxic to man or animals, nor irritating to skin of sprayers and pickers. When in doubt, use *Kryocide!*

**For aphid control: PENCO<sup>\*</sup> BHC (Benzene Hexachloride)**

W-12 Wettable Base has the very high Gamma Isomer content of 12%. Valuable new addition to spray programs, especially for apple aphids (green, rosy, woolly) up to fruit formation. Conforms to Pennsalt's rigid standards of quality and uniformity.

**For spider mites: PENPHOS (Parathion)**

Now in experimental stage is Pennsalt's newest organic phosphate insecticide—*Penphos* (containing Parathion). Tests at Pennsalt's Whitmarsh Research Laboratories show it holds great promise for control of various mites, spiders, aphids.

\* REG. U. S. PAT. OFF.

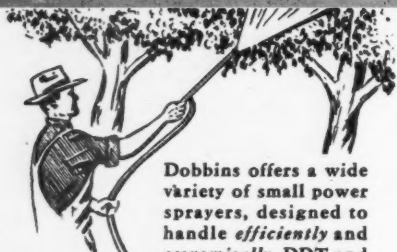
For further details, write to

**PENN  SALT**

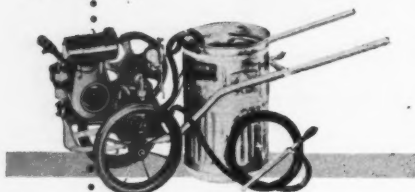
AGRICULTURAL CHEMICALS



**YOU CAN DO THE  
JOB BETTER  
with  
Dobbins  
HIGH-PRESSURE POWER  
SPRAYERS**

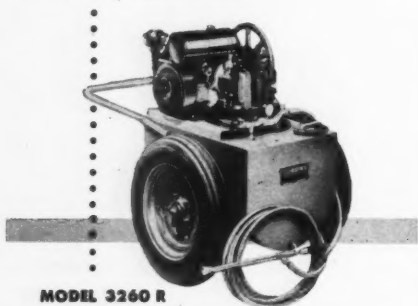


Dobbins offers a wide variety of small power sprayers, designed to handle efficiently and economically, DDT and other insecticide solutions, fungicides, weed control chemicals, whitewash, etc. Each model is sturdily built for years of hard service.



**MODEL 4193 R**

A portable, wheelbarrow-type, power sprayer, easily handled by one man. Double wheel construction for utmost stability. Only 16 inches overall width permits easy access to narrow passageways. Heavy gauge steel tank of 18 gallon capacity. Jet-type agitator keeps spray solutions thoroughly mixed.



**MODEL 3260 R**

Supplied with disc wheels and pneumatic tires. Fifty gallon tank of heavy steel, securely welded. Large filler opening prevents wasteful spilling, makes cleaning easier. Furnished with adjustable spray gun and 25 feet of high pressure hose... 3 gallons per minute at 300 lbs. maximum pressure.

See Dobbins complete line of hand and small power sprayers and dusters at your hardware or garden supply store.

**DOBBINS MANUFACTURING CO.**  
DEPT. 706 • ELKHART, INDIANA

**Dobbins**  
*Superbilt*  
SPRAYERS • DUSTERS

## PREPACKAGING

(Continued from page 19)

The cardboard window box or over-wrapped carton in all types and styles is fast becoming popular for prepackaging fruit since it makes a very attractive package and protects the fruit from bruising. One of the important talking points in its favor is the fact that it keeps the fruit fresher than a pack which exposes the contents to the air. However, there are some dangers in the use of air tight packages, since the fruit must breathe. A certain amount of oxygen must enter the container, and harmful gases that are respired by the fruit must escape. This means that a permeable film must be used in the package, or the fruit will develop a bad taste and odor. Another problem with the window box is to get one in which excessive moisture will not collect. If the window "fogs," the package is not so attractive, and the excessive moisture may cause molding and speed decay. However, these problems can be overcome by selection of the proper type film for the specific fruit that is being packed.

The Joseph P. Sullivan Co. of Ayer, Mass., uses a cardboard over-wrapped "boot" which holds six apples and one which holds 12 apples in two rows. This makes a neat package which the Sullivans say is particularly attractive to apartment house dwellers in urban areas. Storekeepers like it because they find there is no waste if the package is handled properly. However, J. P. Sullivan, Sr. of the firm notes that if the grocer does not move the packages fast enough and the fruit decays, the package will get a bad reputation. In regard to costs of prepackaging, he shares the views of most who try it that the fancy package costs a few cents more, but that the savings to the grocer and the added appeal to the consumer are worth it.

One of the most promising of the new prepackages for apples is the Packette, a package which is tailored to fit the fruit, and which is used by J. Edward McGowan of Marlboro, N.Y.; N. R. Peet & Son, Inc., of Webster, N.Y.; and the Blue Ridge Fruit Co. of Waynesboro, Pa. This container is adaptable to mass production, yet it builds the carton around the fruit, allowing for variability of fruit sizes. It packs the fruit tightly, but is made with a permeable cellophane which lets it breathe. The cellophane is brought to a uniform tension, and the cardboard frame gives the package strength. It packs 12 apples, is attractive, and meets most of the requirements of a good package.

The Inland Orchards of Marshall, Mich., and Johnathan Woodman of Paw Paw, Mich., have been successful

with a 2-pound carton with a tear-out face. The fruit is protected completely until it reaches the retailer. He tears out the face of the carton to expose the fruit, if he cares to.

Franklin Gindick, fresh fruit and vegetable consultant of Los Angeles, has made extensive experiments in the merchandising of prepackaged goods, and has developed a small cardboard container which holds 1½ pounds of plums or apricots, and which can be packed 18 to a single wooden shipping container. The package is successful, and he packed 75,000 of them last year. This year he plans to pack 500,000 of them. The carton is flat, and has a removable cardboard handle on which can be printed the name of the fruit the package contains. This feature permits using the package for several different fruits.

The new wet strength paper bag with a film window shows promise. The bag can be printed on three sides, and is very strong, even when wet. This is a distinct advantage to the housewife who must carry the bag any distance, and it often saves the shipper the trouble of rewrapping dampened packages. If it has become wet accidentally, it will not break.

Pliofilm and acetate bags are taking their place in the prepackaging field. J. W. Farnsworth says he has used several types of packages and finds the bag-type container to be very successful. He says they have used window front bags, but that fruit does not sell as well in them as in the completely transparent bag.

The Farnsworth orchards use window boxes for their own fruit which has a local reputation for quality, but they find that when they pack for other growers whose reputations are not known locally, consumers prefer to buy fruit in the transparent bags. Of course the window boxes have the advantage of packing easily and letting the carton carry much of the weight when the fruit is piled or stacked. In any type of bag, all the weight of the piled fruit rests on the fruit itself.

The California Fruit Growers Exchange has made extensive experiments with the prepackaging of lemons, and finds that the film bag is the best container for them. With lemons, as with other fruit, care must be taken to use only a permeable film that will permit escape of excess moisture.

There are several different materials and films that can be used as coverings for fruit. One of these is LST cellophane which is permeable and permits escape of gases while retaining some moisture. It can be used for apples. MST cellophane is moisture proof and air tight, and is thus risky for fruit, since it retains

(Continued on page 34)

**AMERICAN FRUIT GROWER**

## NORTHWEST STUDIES

(Continued from page 20)

as possible for the packaging operations, with as little cost as possible.

Part of the need for an improved pack is an outgrowth of disruptions of some of the normal marketing procedures during the war. For a few years fruit of almost any kind or condition would sell at a premium price. Needless to say, this induced some careless practices and, at the same time, the shortage of labor in orchards and warehouses made it rather difficult to do as good a job of handling and packing apples as that to which the industry had been accustomed. For a period of years an insufficient number of new packers has been trained. The lax habits acquired by workers during the war are not being discarded easily. In a way, therefore, the industry is under pressure from both ends—from the consumer who wants only the best and from many workers and handlers who still want to do things the easy way.

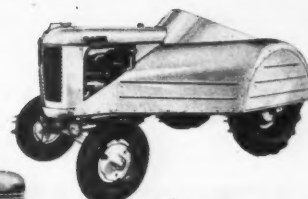
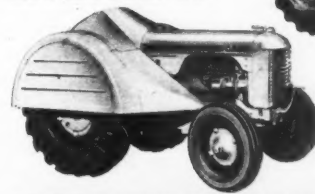
While these problems have been mounting, the industry has been subjected to increasing costs which, during the wartime period, rose on an average of more than 300 percent, and twice that amount on some items. During the current marketing season there undoubtedly were many more boxes of apples sold at prices below the cost of production than those that were sold above it. The prospects for price declines in the supplies that growers buy and in wage reductions are so remote as to be of little consequence. Men in the industry realize this and are generally beginning to look around to find more efficient ways of working. An ample demonstration of this already has been seen in many cases, showing that increased efficiency is the means of solving the cost problem. These efficiencies include new sprays, new methods of applying the spray, mechanized handling with lift trucks, and a number of smaller items. All in all the stimulus to new thought and activity is great, and out of it will come the new package or pack that we feel will continue the leadership that the Pacific Northwest industry has always shown.

As an example of the ways in which packing problems are being handled, we have the tray pack which has been growing in use during recent years and gives evidence of securing even more prominence. In a survey made by the Washington State Apple Commission research department a year ago, it was found that apples on retail display, packed out of the tray (the Friday Pack) showed twice as

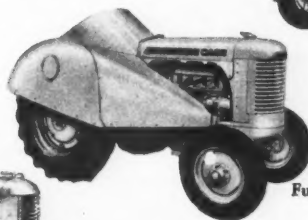
(Continued on page 32)

## THE MORE YOU LOOK ...

Fast 3-plow Model "DO"



Light 2-plow Model "VAO"



Full 2-plow Model "SO"

## THE MORE YOU'LL LIKE A CASE



## It Really Gets Around in Groves

● When you start down the row with a harrow, grain drill or spray rig, you'll like the sure-footed way a Case tractor holds its steady speed and pull. You'll like the way its eager-powered engine throttles down for turns without gear shifting. The more tractors you have used, the more you will notice how many ways a Case saves your time, gets ahead with your work.

You'll also like the **ENDURANCE** of a Case tractor—the way it runs year after year with low upkeep and good fuel economy, gives you extra years of use from your investment. That's why men with the most tractor experience have the highest respect for Case Orchard and Grove Tractors. See your Case dealer for full information and chances of delivery on the model that fits your crops, implements and acreage.



# CASE

**A Heavy-Duty Offset Harrow** recently added to the Case line of orchard implements is the Model "CO." It has anti-friction bearings, factory-sealed with lubricant to last the life of the heat-treated blades. It has no square corners on its snug-fit frame, no parts higher than the blades. It has adjustment to prevent "tracking." Send for "CO" circular; also catalog on any size tractor, folders on any implements you need. J. I. Case Co., Dept. G-13, Racine, Wis.



# NEW HUDSON Power Sprayers

Advanced Design, New Features  
for Easier, Faster, Better  
Spraying. Now Ready for You



**New**

**HUDSON**  
Power Sprayer on  
pneumatic tires  
• 30 or 50 gal. tank  
• 2 or 4 gal. per min.

**New**

**HUDSON**  
Power Sprayer on  
skids for use  
on trucks,  
trailers  
• 30, 50 or  
100 gal. tank  
• 2 or 4 gal.  
per min.

**New**

**HUDSON**  
"Trail-A-Spray"  
• 150 gal. tank  
• 2 or 4 gal. per min.

• Save time—save back-breaking work—with a power sprayer. Just be sure it's a new HUDSON—the most advanced power sprayer ever made. More efficient pumps, new agitators, new nozzles apply spray materials the right way for best results at lowest cost. Rugged all-welded chassis, stainless steel valve assembly, slow-speed long-life pumps assure trouble-free operation.

Hudson power sprayers apply any liquid that can be sprayed: 2, 4-D weed killer, insecticides, fungicides, disinfectants, white-wash, etc. . . in fields, orchards, barns and buildings, everywhere.

See Your HUDSON Dealer, or  
WRITE TODAY FOR FULL DETAILS

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**H. D. HUDSON MANUFACTURING CO.**  
Chicago 11, Illinois



## NORTHWEST STUDIES

(Continued from page 31)

many sound apples and only one-fifth to one-seventh as many severely bruised apples as fruit taken from the standard pack on display in the same

by any means that the standard pack is always bad. The standard Northwest pack put up with care, with apples carefully sized and placed in the box, will deliver fruit in a remarkably bruise-free condition. At the present time an intensive study is underway,

### BRUISE RECORD OF VARIOUS PACKS

Type of Pack	Percent of Apples			
	Sound	Slight Bruise	Severe Bruise	Multiple Bruise
Standard paper liner.....	47.7	35.4	3.4	15.8
Std. 4-way corrug. liner.....	64.4	26.1	.8	8.7
Std. double crepe liner.....	59.8	26.5	1.1	13.3
Std. confetti newsprint.....	64.0	26.1	1.9	9.5
Lt. wgt. crepe wadding layer pads.....	71.2	24.2	0	4.5
Hvy wgt. crepe wadding layer pads.....	73.9	22.0	.4	4.2
Confetti layer pad.....	78.8	20.1	0	1.1
Tray pack in wooden box with corrug. top pad .....	75.0	21.0	.6	4.0

The inter-layer pad packs and the tray pack delivered apples in the best condition.

market area. The emphasis that the trade is placing on bruising makes it look as if this were a type of pack that will increase in use.

During the last season, a test of a number of different types of packs, including the tray pack, was made under actual transit conditions between Yakima and Chicago. After unpacking the apples in Chicago, it was found that the standard pack with wadding and padding between the layers of apples and the tray pack were far superior to standard pack with only paper liners. The record of

making a considerable investment for the improvement of the standard pack. The analysis, when completed, will begin to give information which the industry has long sought, showing the relationships between bruising, the amount of bulge, the weight of the pack, and the placement and sizing of the apples. This study will give information on the susceptibility of each apple in the box to be bruised, and it is hoped that it will make possible a means of quickly determining whether a packer is maintaining the standards of the packing house.

### SALEABLE APPLES INCREASED BY ADDITIONAL LINERS AND PADS

(Compared with Standard Pack Paper Liners)

Type of Pack	Added Value			
	Added lbs. Saleable Apples	FOB @ 6c lb.	Added Value at Retail 10c lb.	Added Cost of Liners & padding
Std. paper liners.....	0	0	0	0
Std. 4-way corrugated liners.....	2.6 lb.	15.6c	26.0c	3.81c
Std. confetti newsprint liners.....	2.6	15.6	26.0	5.42
Std. double crepe liners.....	.7	4.2	7.0	2.62
Light weight crepe wadding layer	2.7	16.2	27.0	6.39
Heavy weight crepe wadding layer	3.2	19.2	32.0	11.35
Confetti newsprint layer pad.....	2.6	15.6	26.0	5.35
Tray pack in wooden box.....	5.2*	31.2	52.0	11.94**

\*Was packed approximately 1½ to 2 pounds overweight and this has been subtracted.

\*\*Less a saving of 3c to 4c on the cost of the container.

the different packs made in this test is shown in the accompanying table.

Translating the ability of the packs tested to deliver bruise-free apples into terms of market values shows that even the increased expense of packing and packing materials makes it more than worthwhile for the retailer to buy apples in a bruise-free pack. In the long run, increased value of the product will be reflected back to the grower. The other table illustrates this point.

While the research that has been done shows high superiority for the tray pack, it should not be concluded

The Washington State apple industry has no intention of stopping with the present progress that has been made. The program for research in the problems of packaging is going ahead at an even more rapid rate. During the coming season, a small testing laboratory is planned to be set up within the state. This will be the means of exploring over and over again the ways in which the standard pack, tray pack, and new ones not yet added to the list, will bring the grower the greatest return, the retailer the most profit, and the consumer the greatest satisfaction.

**AMERICAN FRUIT GROWER**



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## NUT GROWERS NEWS

(Continued from page 24)

ding strips just firmly enough to make a good contact. Too tight wrapping will curtail circulation. Do not cover the cut below the bud. The wound must have drainage. 6. Be sure that the center of the bud-piece is firm against the cambium layer of the stock. If it humps or bows and will not stay down, insert a toothpick or bit of leaf stem or something along the center line to hold it down. We usually do this during the wrapping process.

"We use no wax. We throw a wrap around the bud shoulders even if it may press the petiole forward against the bud. If the center of the bud pulls out, it will not grow although a secondary bud eventually may start. Budding seems about equally successful any time the bark slips freely. On walnuts this is all summer long if not too dry. On walnuts there are always dormant buds. We have used stored wood but now just cut it fresh."

The Secretary has available a free circular of information on the Association, with a list of other publications on propagation and culture of hardy nut trees. Mr. Tuttle's article in full is included in the 38th annual report of the NNGA.

Our 39th annual convention is scheduled for September 13-15, 1948, at Norris, Tennessee, near the Great Smoky Mountains National Park.—*J. C. McDaniel, Sec'y., Northern Nut Growers Assn., Inc. c/o Tenn. Dept. of Agriculture, Nashville 3, Tenn.*

## BOOKLETS

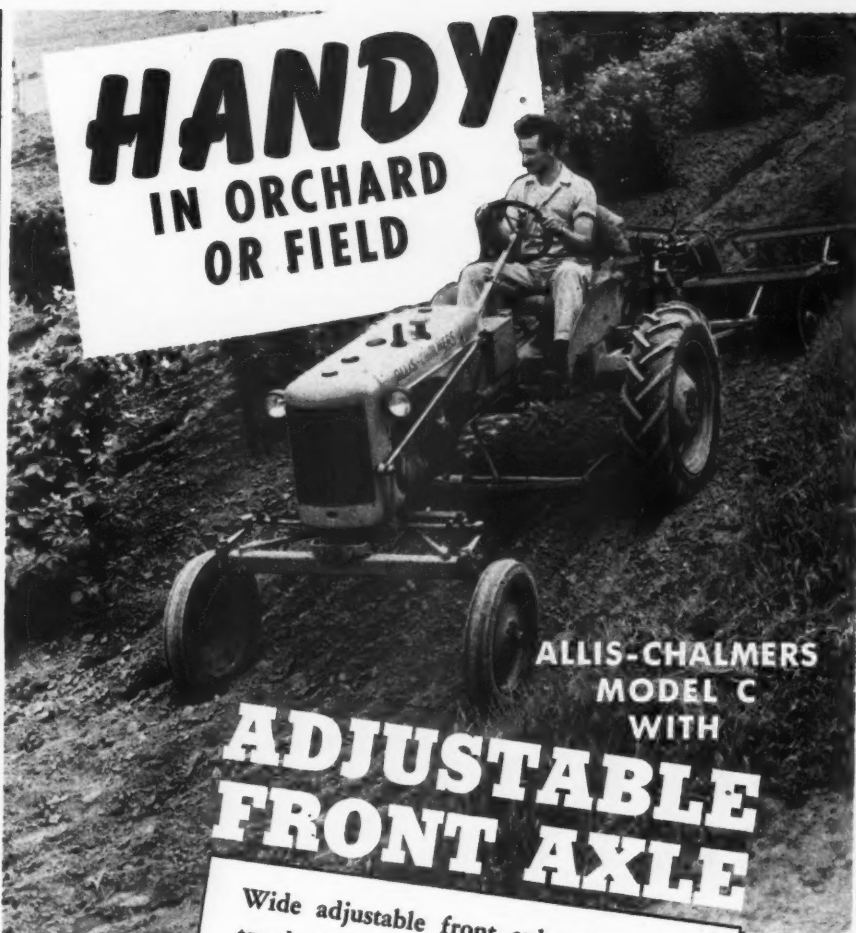
● **Thermometers, barometers, stormoguides, and many other instruments of interest to weather-wise fruit growers** are described and illustrated in Catalog 5000, which is available from the Taylor Instrument Companies.

● **For the benefit of growers who are interested in new developments,** the A. B. Farquhar Co. has printed three catalogs describing their newly-designed and re-designed farm equipment. "High Pressure Sprayers," "Weed Sprayers," and "High Velocity Dusters," make up the trio.

● **"Supplemental Irrigation"** is an excellent booklet written in a non-technical language giving basis irrigation facts with text, pictures, and tables. Marlow Pumps has made this booklet available on request.

● **How to get rid of weeds by using Swift and Co. products** is described in "The Big Step Forward," a booklet put out by this company.

JULY, 1948



**HANDY  
IN ORCHARD  
OR FIELD**

**ALLIS-CHALMERS  
MODEL C  
WITH  
ADJUSTABLE  
FRONT AXLE**

Wide adjustable front axle, shown, for  
treads from 52 to 82 inches . . . corre-  
spond with rear wheel treads.

The Allis-Chalmers Model C with wide adjustable front axle is equally useful in the vineyard, the orchard, the grove — or in the field.

Where hillsides are steep, the adjustable front axle gives stability.

There is ample power for operating a 200- to 300-gallon power take-off driven sprayer . . . plenty of power and quick maneuverability for pulling drawbar tools used for fruit tillage.

For cultivation, a two- or four-row clear-vision cultivator can be quickly attached.

When you buy a tractor for fruit tillage, it will pay you to consider these Model C features: (1) efficient, ready power for most any job; (2) reasonable price; (3) economical operation. You will find that such features make the Model C the handy tractor.

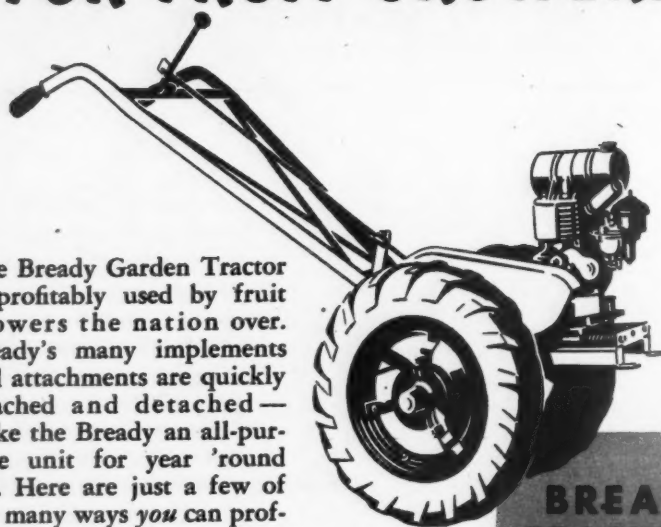
See your Allis-Chalmers dealer.

**ALLIS-CHALMERS**  
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

# Bready

## GARDEN TRACTOR

### A REAL PROFIT MAKER FOR FRUIT GROWERS!



The Bready Garden Tractor is profitably used by fruit growers the nation over. Bready's many implements and attachments are quickly attached and detached — make the Bready an all-purpose unit for year 'round use. Here are just a few of the many ways *you* can profitably use the Bready Garden Tractor —

**CULTIVATES SMALL FRUITS.** Use the Bready Front-Cultivator to cultivate brambles and strawberries — use it in your garden too!

**DISCS.** The Bready Disc thoroughly pulverizes clods and lumps in preparing the seed bed.

**EASIER PRUNING.** A very useful Bready attachment is the Pneumatic Pruner — used with Air Compressor — makes pruning quicker and easier.

**SPRAYS.** The Bready Sprayer, also used with Air Compressor, gives you a portable spray outfit for spraying insecticides and paint.

**MOW AROUND TREES AND FENCE ROWS.** Use the Cutter-Bar attachment to keep weeds down.

#### BREADY FEATURES

Patented Front-Hitch power application gives 30% extra traction... Adjustable wheels from 21" to 31" ... Handles adjustable for height ... Ratchets in each wheel for short turns ... 1½ H.P. motor ... Easy to operate ... economical to use.

#### BREADY IMPLEMENTS and ATTACHMENTS

Plow, Cultivator, Disc-Harrow, Spike-tooth Harrow, Furrower, Hillers, Seeder, Cutter-Bar, Hay Baler, Lawn Mower, 3-gang Lawn Mower, Sprayer, Duster, Air Compressor, Centrifugal Pump, Pneumatic Pruner, Sift, Cart, Snow Plow, Riding-type Roller.

**WRITE TODAY for full information and prices!**

**THE BREADY TRACTOR & IMPLEMENT CO.**

#### PREPACKAGING

(Continued from page 30)

too much moisture, and does not permit sufficient escape of gases. Lumarith is an acetate film which is more porous than the LST cellophane. It permits free passage of moisture and gases. It has the advantage that it will not "fog," but it may be insufficient protection against dehydration of fruit in dry climates. Pliofilm is manufactured, as are the others, in many types and gauges. Not all of them are suitable for fruit, but some are thoroughly satisfactory. It is very important that the grower use the type of film that is recommended for the kind of fruit he is packaging.

Some growers have found that small, consumer-size baskets are popular with store customers, and the Grand River Orchards of Geneva, Ohio use a 4-quart corrugated paper basket with wooden handle and a raised cover. They find that it makes a convenient container for carrying, and the raised lid and cardboard sides protect the fruit from bruising. They experimented for years to find the best size and shape of container, and finally achieved their present package which is acceptable to the U.S. Bureau of Standards. They have tried all other types of consumer packages, but feel that the protection against bruising is one of the most important features of the basket. They stress the importance of experimenting carefully to get exactly the right type of container.

Trexler Farms of Allentown, Pa., use a 2- to 4-quart till-type basket which they find very successful. They put a wooden handle on it, which makes it convenient for carrying. They also find the 5- and 10-pound mesh bag to be a very successful package.

Questions revealed, also, that prepackaging should be done on a large enough scale to absorb the added overhead, and that it should be gone into only after much careful consideration as to the best type of container suited to the growers' and consumers' needs.

All of the growers expressed the idea that the first consideration in prepackaging should be quality of the fruit in the package. Stanley Fulton of Hancock, Md., epitomized their statements when he said, "I do not think the container itself is the most important factor. The important thing is quality and condition at the time of purchase, and I feel any container that will do this with a reasonable cost involved will meet with a degree of success."

For names of manufacturers of packages and equipment see "Packages and Packaging" department of the Directory section.



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## FIVE-POUND BAG

(Continued from page 28)

"The job of our apple industry—from the grower through to the retailer—is to prevent bruised fruit. It seems to me the best way to do this is to package apples in containers made to fit them instead of putting them in any kind of box just because it has been used for decades.

"Apples are not a manufactured article. They nearly always leave the tree in top condition, but from then on they start going downhill. A semipermanent product like apples needs special care.

The Washington State Apple Advertising Commission, which spends well over \$1½ million annually promoting this fruit, also has more than a passing fancy for consumer packages.

"While our heavy volume has been, and is, shipped in wooden boxes, the markets are becoming more particular as to condition, and this tends to increase quality packs," says Harold E. Copple, the Commission's secretary-manager. "Self-service stores are particularly interested in consumer packs—some of which are now going 100 percent for this type of merchandise.

"The big question is whether or not we can put up suitable packs here at the producing end, and it looks like we are on the way. We must put quality first, give the apples full protection in transit and in stores, and accommodate a wide range of sizes. The consumer packages which are now being so well-received have accomplished these objectives, and are filling a desired need for specific markets."

Like the fabulous Johnny Appleseed, his modern counterpart, the present-day apple grower believes that "Love, Faith, and the Apple Tree" are an unbeatable combination. But to these, he is adding modern, common-sense production methods, streamlined handling practices, and progressive merchandising. He is dressing old King Apple in new and regal robes, and rightfully believes that this formula, along with some real hard work, will make his future secure.

### PLAST-O-TRETE

Plast-O-Trete "F" is a new liquid compound of plastic, food preservatives, and water which is applied to the skin of fruit to prevent spoilage. It can be brushed or sprayed on, or the fruit can be dipped in the liquid; and it dries very quickly. Where the skin of the fruit is unsuitable for direct application, wrapping papers can be impregnated with the plastic fluid. The West Atlantic Corp. is the sole manufacturer of Plast-O-Trete.

APHIDS, WOOLLY APPLE APHIDS, THRIPS, COLORADO POTATO BEETLES, FLEA BEETLES, SPITTLE BUGS, STRAWBERRY WEEVILS, BLUEBERRY WEEVILS, PLUM CURCULIO, LYGUS BUGS, PEAR PSYLLA, CUCUMBER BEETLES, MELON and PICKLE WORMS, GRASSHOPPERS and CRICKETS, PEPPER WEEVILS, STINK BUGS, WIREWORMS, CUTWORMS, WHITE GRUBS, DIABROTICA LARVAE, LEAF MINERS, TARNISHED PLANT BUGS, CERTAIN LEPIDOPTEROUS LARVAE, ASPARAGUS BEETLES, CABBAGE SEED POD BORERS, CABBAGE WORMS and MAGGOTS, LACEBUGS, LOOPERS, WEBWORMS.



**ORTHO**  
SCIENTIFIC PEST CONTROL

**ORGANIC  
INSECTICIDES**

Consult your local Fieldman for specific details... take advantage of his expert assistance.

In these ORTHO organic formulations, fruit and vegetable growers have exceedingly versatile insecticides, effective against many different insects. They control three ways—by contact, stomach, fumigation and are compatible with most of the generally used insecticides and fungicides.

### ISOTOX®

Technically pure Gamma Isomer of Benzene Hexachloride. Compared to BHC, it is practically odorless and can be used on most fruits and vegetables... either by dusting or by spraying.

**ISOTOX Spray**  
No. 200

Liquid containing 20% technically pure Gamma Isomer for spraying.

**ISOTOX Wettable**  
No. 250

Powder containing 25% technically pure Gamma Isomer for spraying.

#### ISOTOX Dusts

Containing 1/3%, 1% and 14% technically pure Gamma Isomer for specific purposes.

### GAMTOX®

Gives excellent control of many destructive insects. Time the applications and use on selected crops to avoid odor.

**GAMTOX Wettable**  
No. 100

Spray powder containing 10% Gamma Isomer.

**GAMTOX Dusts**

Containing various percentages of Gamma Isomer.

RICHMOND, CALIFORNIA ELIZABETH, NEW JERSEY  
LYNDONVILLE, NEW YORK SOUTH HAVEN, MICHIGAN

ORLANDO, FLORIDA PORTLAND, OREGON

BOISE, IDAHO KANSAS CITY, MISSOURI DALLAS, TEXAS



# BUYER'S GUIDE FOR THE FRUIT FARM

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**"How do you prevent wind  
loss and pre-harvest drop?"**



Growing topnotch fruit calls for expert knowledge, long experience and constant effort—the kind of effort which makes full use of Dow's dependable line of sprays and "harvest protection" materials, such as App-L-Set.

Experienced growers know and recommend App-L-Set to keep apples and Bartlett pears "tied" to the trees until they reach top market quality. Spraying with App-L-Set or dusting with App-L-Set dust lengthens the picking period—eliminates "spot picking" to a large degree—and simplifies your labor problem. One application is usually effective for 9 or 10 days—or longer—depending on variety. See your qualified dealer—or your state experiment station.

**CLEAN FRUIT SELLS**

Summer spraying and dusting: For economy and ability to do a job, more growers each year praise *DN-111* and *DN-Dust D4* for control of red mite. *DN-111* gives excellent results alone or combined with sulphur, lead arsenate or DDT Wettable Powder—and can be used with App-L-Set for mite control during preharvest stage. Ask your dealer—see your state experiment station.

AGRICULTURAL CHEMICAL DIVISION

**THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN**

New York • Boston • Philadelphia • Washington • Cleveland • Detroit  
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle  
Dow Chemical of Canada, Limited, Toronto, Canada

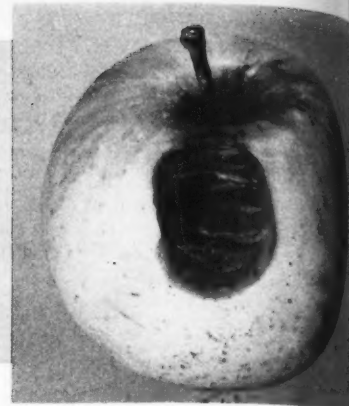
**APP-L-SET**







# ORCHARD CHEMICALS



## INSECTICIDES

### ARSENICALS

#### Calcium Arsenate

American Agricultural Chemical Co., New York, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Commercial Chemical Co., Memphis, Tenn.  
Corona Chemical Div. of Pittsburgh Plate Glass Co., Milwaukee, Wis.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Interstate Chemical Mfg. Co., Reading, Pa.  
John Lucas & Co., Inc., Philadelphia, Pa.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.  
Philipp Bros. Inc., New York, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Tritox Chemical Co., Washington, Ind.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

#### Lead Arsenate

American Agricultural Chemical Co., New York, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Corona Chemical Div. of Pittsburgh Plate Glass Co., Milwaukee, Wis.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
John Lucas & Co., Inc., Philadelphia, Pa.



STANDARD AGRICULTURAL CHEMICALS, INC.  
1301 JEFFERSON STREET - HOBOKEN, NEW JERSEY  
429 FORUM BLDG. - SACRAMENTO, CALIFORNIA

Micronizer Processing Co., Inc., Moorestown, N. J.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Philipp Bros. Inc., New York, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

### Paris Green

Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
John Lucas & Co., Inc., Philadelphia, Pa.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Philipp Bros. Inc., New York, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Sterling Chemicals, Inc., Newark, N.J.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

### Zinc Arsenite

California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Philipp Bros. Inc., New York, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio

### BENZENE HEXACHLORIDE

California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Commercial Solvents Corp., New York, N.Y.  
Dow Chemical Co., Midland, Mich.  
Geigy, Inc., New York, N.Y.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
O. E. Linck Co., Inc., Clifton, N.J.  
Monsanto Chemical Co., St. Louis, Mo.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.  
Westvaco Chlorine Products Corp., New York, N.Y.

### CHLORDANE

Carbide & Carbon Chemicals Corp., New York, N.Y.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Hooker Electrochemical Co., Niagara Falls, N.Y.  
Julius Hyman & Co., Denver, Colo.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Planetary Chemical Co., Creve Coeur, Mo.  
Velsicol Corp., Chicago, Ill.  
Westvaco Chlorine Products Corp., New York, N.Y.

### CHLORINATED CAMPHENE

American Cyanamid Co., Insecticide Dept., New York, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Hercules Powder Co., Wilmington, Del.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.

### DDT (DICHLORODIPHENYLTRI-CHLOROETHANE)

Agicide Laboratories, Inc., Racine, Wis.  
American Home Products, Marietta, Ohio  
J. C. Baker Chemical Co., Phillipsburg, N.J.  
Bonide Chemical Co., Utica, N.Y.  
Boyle Midway, Inc., New York, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Carbola Chemical Co., Inc., Natural Bridge, N.Y.  
Central Chemical Corp., Hagerstown, Md.  
Charles Edwards Chemical Corp., Philadelphia, Pa.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Cincinnati Chemical Works, Inc., Cincinnati, Ohio  
Dow Chemical Co., Midland, Mich.

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Geigy, Inc., New York, N.Y.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Hercules Powder Co., Wilmington, Del.  
Hooker Electro Chemical Co., Niagara Falls, N.Y.

Kolker Chemical Works, Newark, N.J.  
O. E. Linck Co., Inc., Clifton, N.J.  
McCormick & Co., Inc., Baltimore, Md.  
McLaughlin Gormley King Co., Minneapolis, Minn.

Merck & Co., Rahway, N.J.  
Michigan Chemical Co., St. Louis, Mich.  
Miller Chem. & Fertilizer Corp., Baltimore, Md.  
Monsanto Chemical Co., St. Louis, Mo.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.

S. B. Penick & Co., New York, N.Y.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.  
Philipp Bros. Inc., New York, N.Y.  
Planetary Chemical Co., Creve Coeur, Mo.  
John Powell & Co., Inc., New York, N.Y.  
B. G. Pratt Co., Hackensack, N.J.  
Röhm & Haas Co., Philadelphia, Pa.  
Sherwin-Williams Co., Cleveland, Ohio  
Standard Oil Co. of Indiana, Chicago, Ill.  
Stauffer Chemical Co., New York, N.Y.  
U. S. Rubber Co., New York, N.Y.  
Westvaco Chlorine Products Corp., New York, N.Y.  
Woolfolk Chemical Works, Ltd., Fort Valley, Ga.

### DINITRO COMPOUNDS

Chipman Chemical Co., Inc., Bound Brook, N.J.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Standard Agricultural Chemicals, Inc., Hoboken, N.J.

### FLUORINE COMPOUNDS

Aluminum Ore Co., Pittsburgh, Pa.  
American Cyanamid Co., Insecticide Dept., New York, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.  
Philipp Bros. Inc., New York, N.Y.  
Stauffer Chemical Co., New York, N.Y.

### TETRAETHYL PYROPHOSPHATE

California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
O. E. Linck Co., Inc., Clifton, N.J.  
Monsanto Chemical Co., St. Louis, Mo.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Planetary Chemical Co., Creve Coeur, Mo.  
Sherwin-Williams Co., Cleveland, Ohio

### ZINC SULPHATE

Brooklyne Chemical Co., Baltimore, Md.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Eagle-Picher Sales Co., Cincinnati, Ohio  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Glidden Co., Cleveland, Ohio  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Philipp Bros. Inc., New York, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Tennessee Corp., Atlanta, Ga.  
Virginia Smelting Co., West Norfolk, Va.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

AMERICAN FRUIT GROWER

## NICOTINE

### Nicotine Sulphate

American Nicotine Co., Henderson, Ky.  
California Spray-Chemical Corp., Richmond, Calif., & Elizabeth, N. J.  
Central Chemical Corp., Hagerstown, Md.  
Crystal Soap & Chem. Co., Inc., Philadelphia, Pa.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
James Good Co., Philadelphia, Pa.  
Kay-Fries Chemicals, Inc., New York, N.Y.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Nico-Dust Co., Los Angeles, Calif.  
Nicotine Production Corp., Clarksville, Tenn.  
Philipp Bros. Inc., New York, N.Y.  
B. G. Pratt Co., Hackensack, N. J.  
Sherwin-Williams Co., Cleveland, Ohio  
Tobacco By-Products & Chemical Corp., Louisville, Ky.  
United States Gypsum Co., Chicago, Ill.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

**"Black Leaf 40"**

**TOBACCO BY-PRODUCTS & CHEMICAL CORP.  
INCORPORATED LOUISVILLE, KENTUCKY**

### Fixed Nicotine

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Miller Chemical & Fertilizer Corp., Baltimore, Md.  
Tobacco By-Products & Chemical Corp., Louisville, Ky.

**"Black Leaf 155"**

**TOBACCO BY-PRODUCTS & CHEMICAL CORP.  
INCORPORATED • LOUISVILLE, KENTUCKY**

## OILS

### Emulsions and Miscible Oils

Summer Oils, Dormant Oils, Tar Emulsions  
Archer-Daniels-Midland Co., Minneapolis, Minn.  
Atlas Powder Co., Wilmington, Del.  
California Spray-Chemical Corp., Richmond, Calif., & Elizabeth, N. J.  
Central Chemical Corp., Hagerstown, Md.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
James Good Co., Philadelphia, Pa.  
Gulf Refining Co., Pittsburgh, Pa.  
A. C. Horn Co., Inc., Long Island City, N.Y.  
Miller Chem. & Fertilizer Corp., Baltimore, Md.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
B. G. Pratt Co., Hackensack, N. J.  
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.  
Shell Oil Co., Inc., New York, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Silmo Chemical Co., Inc., Vineland, N.J.  
Socony-Vacuum Oil Co., New York, N.Y.  
L. Sonneborn Sons, Inc., New York, N.Y.  
Standard Agricultural Chemicals, Inc., Hoboken, N.J.  
Standard Oil Co. of Indiana, Chicago, Ill.  
Sun Oil Co., Philadelphia, Pa.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

## ORGANIC THIOCYANATES

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.

## TET-200

### MISCIBLE TETRAETHYL PYROPHOSPHATE

#### Controls Aphids, Red Spiders, Mites

40% TEPP Content Guaranteed. One pound makes 400 gallons of spray. Highest Concentration

Plus Complete Miscibility with Water

### PLANETARY CHEMICAL COMPANY

Creve Coeur, Missouri

Mfrs. of Orchard and Agricultural Chemicals  
DEALER AND DISTRIBUTORSHIPS OPEN

## PARATHION

American Cyanamid Co., Insecticide Dept., New York, N.Y.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.

## PHENOTHIAZINE

Central Chemical Corp., Hagerstown, Md.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Merck & Co., Inc., Rahway, N.J.

## PYRETHRUM AND DERIVATIVES

Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Farnam Co., Omaha, Nebr.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Kay-Fries Chemicals, Inc., New York, N.Y.  
McCormick & Co., Inc., Baltimore, Md.  
McLaughlin Gormley King, Minneapolis, Minn.  
S. B. Penick & Co., New York, N.Y.  
B. G. Pratt Co., Hackensack, N. J.  
Sterling Chemicals, Inc., Newark, N.J.

## ROTENONE PRODUCTS

Agicide Laboratories, Inc., Racine, Wis.  
Bonide Chemical Co., Utica, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., & Elizabeth, N. J.  
Carbola Chemical Co., Inc., Natural Bridge, N.Y.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Farnam Co., Omaha, Nebr.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
McCormick & Co., Inc., Baltimore, Md.  
McLaughlin Gormley King, Minneapolis, Minn.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
S. B. Penick & Co., New York, N.Y.  
B. G. Pratt Co., Hackensack, N. J.  
Sterling Chemicals, Inc., Newark, N.J.  
Tritox Chemical Co., Washington, Ind.  
U.S. Rubber Co., New York, N.Y.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

## FUNGICIDES

### SULPHURS

#### Dry Lime Sulphur

Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Corona Chemical Div. of Pittsburgh Plate Glass Co., Milwaukee, Wis.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
John Lucas & Co., Inc., Philadelphia, Pa.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Philipp Bros. Inc., New York, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Stauffer Chemical Co., New York, N. Y.

#### Liquid Lime Sulphur

California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N. J.  
Central Chemical Corp., Hagerstown, Md.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
John Lucas & Co., Inc., Philadelphia, Pa.  
Miller Products Co., Portland, Ore.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Stauffer Chemical Co., New York, N. Y.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

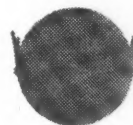
#### Wettable Sulphur

California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N. J.  
Camden Coke Plant, Camden, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Corona Chemical Div. of Pittsburgh Plate Glass Co., Milwaukee, Wis.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Koppers Products Co., Pittsburgh, Pa.  
Micronizer Processing Co., Inc., Moorestown, N.J.  
National Sulphur Co., Inc., New York, N.Y.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Stauffer Chemical Co., New York, N.Y.  
Tennessee Corp., Atlanta, Ga.  
U. S. Rubber Co., New York, N. Y.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.



*Corona*  
*Products*

**For the  
FRUIT GROWER**



**Arsenate of Lead**

**Micronized\* Sulfur  
Wettable and Dusting**

**50-50-W**

**(Micronized wettable  
powder containing  
50% DDT)**

**3% DDT DUST**

**5% DDT DUST**



**Corona Chemical Division  
MILWAUKEE 1, WISCONSIN**

**PITTSBURGH  
PLATE GLASS COMPANY**

\*Trade Mark Reg. by The Micronizer Company,  
Moorestown, New Jersey

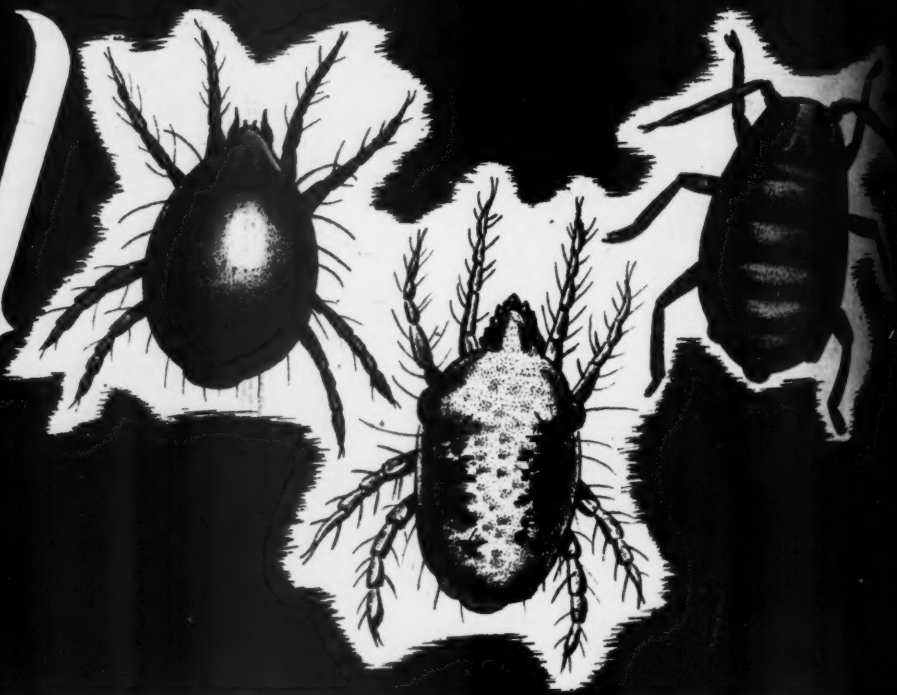


# You'll collect - if you p

## HERE'S HOW TO GET MORE

Keep Mites  
Red Spiders  
and Aphids

# OFF



with

# SUPER KILLEX

with



**D**ON'T let the pests eat up your profits and your hard work. Instead, send your crop to market and get your money out of it. This is a critical year for mites, red spiders and aphids—but Super Killex gives these pests not only a bad time, but sure death by direct contact.

Super Killex leaves no toxic residue on fruit crops and can safely be used up till one week before harvest. Super Killex has high insecticidal activity even during periods of low temperatures. Containing 100% active ingredients, Super Killex mixes readily with water for use in all types of sprayers.

**Attention Pacific Coast Growers: S-W Killex 50 is specially prepared to meet Pacific Coast conditions.**

SHERWIN-WILLIAMS  
AGRICULTURAL CHEMICALS  
COVER THE CROPS THAT  
COVER THE EARTH

# SHERWIN-WILLIAM A

# You protect - Both Ways

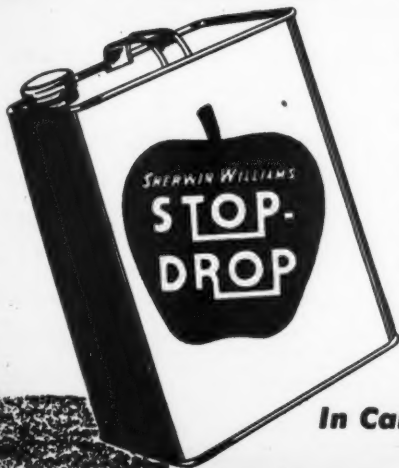
MORE CASH OUT OF THIS YEAR'S CROP

Keep your  
Apples and  
Pears

**ON**



## EX with **STOP-DROP**



**Y**OU'VE got to keep them on the tree if you're going to get your money out of them! STOP-DROP reduces premature dropping—prolongs your picking season—stops your losses. Equally effective on all varieties of apples—Transparent, Duchess, Wealthy, McIntosh, Delicious, Stayman and Winesap—and also Bartlett pears.

STOP-DROP is the largest-selling and

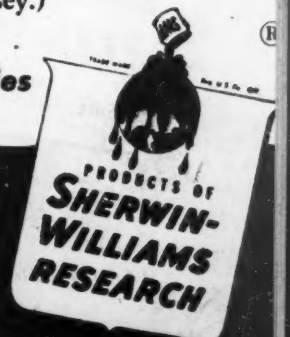
most successfully used pre-harvest spray—becomes effective in 24 to 48 hours. Stop-Drop formulations are available for use in conventional ground sprayers, "speed" sprayers, airplane sprayers and dusters. Better get busy if you want to get the crops! The Sherwin-Williams Co., Agricultural Chemicals Division, Cleveland 1, Ohio. (Export Division, Newark, New Jersey.)

*In Canada ask for Green Cross Insecticides and Fungicides*

# AN AGRICULTURAL CHEMICALS

GROWER JULY, 1948

41

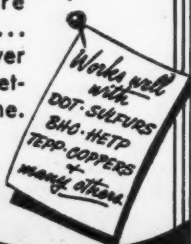




## SAVE SPRAY DOLLARS WITH COLLOIDAL Z-1 SPREADER-DEPOSITOR

Make your sprays go farther this season. Colloidal Z-1 gives heavier deposits, smooth, long-lasting coverages, on more trees per tank... This means lower labor costs, a better job in less time.

Write for  
free folder  
and samples



### COLLOIDAL PRODUCTS CORPORATION

SAN FRANCISCO 11, CALIFORNIA  
Spreaders • Deposit Builders • Stickers  
for Agricultural Sprays and Dusts

### SUPERSPRAY LIME

for dusting and spraying  
99.5% minus 325 mesh  
Will not cut nozzles

Has good sticking qualities

OHIO HYDRATE & SUPPLY CO.  
Woodville, Ohio

## ORCHARD CHEMICALS FUNGICIDES

### COPPER COMPOUNDS

#### Bordeaux Mixture

American Agricultural Chem. Co., New York, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N. J.  
Celotex Corp., Chicago, Ill.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Corona Chemical Div. of Pittsburgh Plate Glass Co., Milwaukee, Wis.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
John Lucas & Co., Inc., Philadelphia, Pa.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Phelps Dodge Refining Corp., New York, N. Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Tennessee Corp., Atlanta, Ga.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

#### Insoluble (Also known as Fixed Coppers)

California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N. J.  
Carbola Chemical Co., Inc., Natural Bridge, N.Y.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Geigy Co., Inc., New York, N.Y.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Harshaw Chemical Co., Cleveland, Ohio  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.  
B. G. Pratt Co., Hackensack, N.J.  
Röhm & Haas Co., Philadelphia, Pa.  
Sherwin-Williams Co., Cleveland, Ohio  
Tennessee Corp., Atlanta, Ga.  
Woolfolk Chemical Works, Ltd., Ft. Valley, Ga.

#### Soluble Copper Sulphate

Brooklyne Chemical Co., Baltimore, Md.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N.J.  
Carbola Chemical Co., Inc., Natural Bridge, N.Y.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.

### DITHIOCARBAMATES

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Monsanto Chemical Co., Akron, Ohio  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Röhm & Haas Co., Philadelphia, Pa.  
Sherwin-Williams Co., Cleveland, Ohio

### ORGANO-MERCURI

Central Chemical Corp., Hagerstown, Md.  
Gallowhur Chemical Corp., New York, N.Y.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.

### QUINONES

U. S. Rubber Co., New York, N.Y.

### QUATERNARY-AMMONIUM

Onyx Oil & Chemical Co., Jersey City, N.J.

## ADJUVANTS

### LIME

Celotex Corp., Chicago, Ill.  
Central Chemical Corp., Hagerstown, Md.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Gibsonburg Lime Products Co., Gibsonburg, Ohio  
Kimbalton Lime Co., Inc., Shawsville, Va.  
Marble Cliff Quarries Co., Columbus, Ohio  
National Gypsum Co., Buffalo, N. Y.  
Ohio Hydrate & Supply Co., Woodville, Ohio  
Philipp Bros. Inc., New York, N.Y.  
Scioto Lime & Stone Co., Delaware, Ohio  
United States Gypsum Co., Chicago, Ill.  
Warner Co., Bellefonte Div., Bellefonte, Pa.  
Woodville Lime Products Co., Toledo, Ohio  
Woolfolk Chemical Works, Ltd., Ft. Valley, Ga.

## CALCIUM *Spraying* and Dusting LIME

96% passing 400 mesh screen. Stays in suspension longer. Covers more thoroughly. Two convenient Ohio shipping points. Write or phone for information and prices.

The MARBLE CLIFF QUARRIES CO.

Agricultural Division

MAin 4121

Columbus 15, Ohio

### SPREADERS, SOAPS AND STICKERS

American Cyanamid Co., Insecticide Dept., New York, N.Y.  
Archer-Daniels-Midland Co., Minneapolis, Minn.  
California Spray-Chemical Corp., Richmond, Calif., and Elizabeth, N. J.  
Central Chemical Corp., Hagerstown, Md.  
Central Soya Co., Fort Wayne, Ind.  
Colgate-Palmolive Peet Co., Jersey City, N.J.  
Colloidal Products Corp., San Francisco, Calif.  
Crystal Soap & Chem. Co., Inc., Philadelphia, Pa.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Glidden Co., Soya Products Div., Chicago, Ill.  
James Good Co., Philadelphia, Pa.  
B. F. Goodrich Chemical Co., Cleveland, Ohio.  
Kay-Fries Chemicals, Inc., New York, N.Y.  
Lever Bros., Cambridge, Mass.  
Monsanto Chemical Co., St. Louis, Mo.  
National Oil Products Co., Harrison, N. J.  
Planetary Chemical Co., Creve Coeur, Mo.  
B. G. Pratt Co., Hackensack, N. J.  
Procter & Gamble Co., Cincinnati, Ohio  
Röhm & Haas Co., Philadelphia, Pa.  
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.  
Sherwin-Williams Co., Cleveland, Ohio  
Standard Agricultural Chemicals, Inc., Hoboken, N.J.  
Tritox Chemical Co., Washington, Ind.  
Whittaker, Clark & Daniels, Inc., New York, N.Y.  
Wyodak Chemical Co., Cleveland, Ohio

AMERICAN FRUIT GROWER



## Use this sure way to control PEACH BORERS

You control peach borers with far less labor and time when you use Para-Scalecide — the simple dipper method of applying paradichlorobenzene. It is safer and more effective on both young and old trees than other methods.

Simply dilute Para-Scalecide with water and pour with a dipper against the base of the tree. Then throw a few shovelfuls of earth against the base to hold the fumes.

Apply in the Fall while the ground temperature is 60° or warmer. One gallon of Para-Scalecide treats 42 full-grown trees, or 128 two-year old trees.

Be sure of safe, simple control of peach borers. Order Para-Scalecide from your dealer today. Write us for free Peach Borer circular.

There's a Pratt Spray for Every Need

B. G. PRATT CO.  
63 RIVER ST., HACKENSACK, N. J.

D-X Spray • DDT Sprays • Sulfocide • Pratt's 622 Insect Repellent • Garden Sprays and Dust

## FUMIGANTS

### ETHYLENE DICHLORIDE

Carbide & Carbon Chemicals Corp., Unit of  
Union Carbide & Carbon Corp., New York,  
N.Y.  
Crystal Soap & Chemical Co., Inc., Philadelphia,  
Pa.  
Dow Chemical Co., Midland, Mich.  
E. I. DuPont de Nemours & Co., Inc., Grasselli  
Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye  
Corp., New York, N.Y.  
Niagara Chemical Div., Food Machinery Corp.,  
Middleport, N.Y.  
Philipp Bros. Inc., New York, N.Y.  
Westvaco Chlorine Products Corp., New York,  
N.Y.  
Woolfolk Chemical Wks. Ltd., Ft. Valley, Ga.

### METHYL BROMIDE

California Spray-Chemical Corp., Richmond,  
Calif. & Elizabeth, N.J.  
Dow Chemical Co., Midland, Mich.  
E. I. DuPont de Nemours & Co., Inc., Grasselli  
Chemicals Dept., Wilmington, Del.  
Michigan Chemical Co., St. Louis, Mich.  
Westvaco Chlorine Products Corp., New York,  
N.Y.

### AEROSOL BOMBS

Bridgeport Brass Co., Bridgeport, Conn.  
Virginia Smelting Co., W. Norfolk, Va.

### PARADICHLOROBENZENE

American Cyanamid Co., Insecticide Dept.,  
New York, N.Y.  
California Spray-Chemical Corp., Richmond,  
Calif. & Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Crystal Soap & Chem. Co., Inc., Philadelphia,  
Pa.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Gras-  
selli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye  
Corp., New York, N.Y.  
Mallinckrodt Chemical Works, St. Louis, Mo.  
Merck & Co., Inc., Rahway, N.J.  
Monsanto Chemical Co., St. Louis, Mo.  
Niagara Chemical Div., Food Machinery Corp.,  
Middleport, N.Y.  
Philipp Bros. Inc., New York, N.Y.  
B. G. Pratt Co., Hackensack, N. J.  
Solvay Sales Div., Allied Chem. & Dye Corp.,  
New York, N.Y.  
Woolfolk Chemical Wks., Ltd., Ft. Valley, Ga.

### CALCIUM CYANIDE

American Cyanamid Co., Insecticide Dept.,  
New York, N.Y.  
Maher & Co., Houston, Texas  
Merck & Co., Rahway, N.J.  
Phillips & Jacobs Co., Philadelphia, Pa.

## NEW COMPATIBILITY CHART

Reprinted in three colors on heavy  
stock suitable for hanging on the  
wall.

Every fruit grower needs this chart  
as an accurate guide in mixing his  
insecticides and fungicides.

While the present supply lasts, we  
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everything in ONE PACKAGE  
... NO WASTE—NO BOTHER

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Kills peach tree-borers.



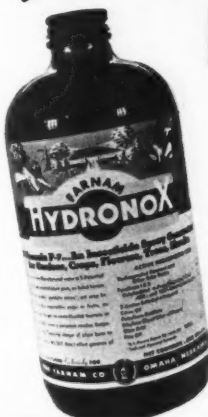
Farm and Orchard Chemicals

Woolfolk Chemical Works, Ltd., Fort Valley, Ga.



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## For POSITIVE Safe CONTROL of PLANT-PESTS!



Entirely new principle in plant-pest control! Not a deadly  
poison, yet this powerful, liquid concentrate kills plant-  
pests on contact at dilutions up to 1 to 800. Amazing  
new Hydronox formula, based on U. S. Patented Process,  
kills cold-blooded plant-pests with double paralytic action;  
yet is SAFE (non-toxic) to warm-blooded humans and  
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Has long-lasting, residual toxicity to a wide variety of  
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Recommended for Flowers, Plants, Vegetable  
Gardens, Trees, Shrubs, Lawns, Orchards and Vine-  
yards, also certain "crop pests" on the farm.

**SAFE** to use on edible crops, fruits, vege-  
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Won't affect genetics.

**EASY** to apply! Goes on evenly. Spreads,  
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more and more fruit  
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HERE'S WHY...**

Vigoro helps them grow more profitable crops of fruit. It brings complete satisfaction to those who use it regularly.

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American Cyanamid Co., Insecticide Dept., New York, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., & Elizabeth, N.J.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Dougherty Chemicals, Richmond Hill, N.Y.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Eastman Kodak Co., Rochester, N.Y.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Jean Maclean, Bridgeton, Ind.  
Merck & Co., Inc., Rahway, N.J.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Philipp Bros. Inc., New York, N.Y.  
Shell Oil Co., New York, N.Y.  
Sherwin-Williams Co., Cleveland, Ohio  
Thompson Horticultural Chemicals Corp., Los Angeles, Calif.  
Westville Laboratories, Stepney, Conn.

#### HARVEST DUST

American Chemical Paint Co., Ambler, Pa.  
California Spray-Chemical Corp., Richmond, Calif., & Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
Jean Maclean, Bridgeton, Ind.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Shell Oil Co., Inc., New York, N.Y.  
Thompson Horticultural Chemicals Corp., Los Angeles, Calif.  
Westville Laboratories, Inc., Stepney, Conn.

Keep your fruit on the tree until ripe  
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Available in any quantity

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American Chemical Paint Co., Ambler, Pa.  
Associated Chemists, Inc., North Collins, N.Y.  
J. T. Baker Co., Phillipsburg, N.J.  
Bonide Chemical Co., Utica, N.Y.  
California Spray-Chemical Corp., Richmond, Calif., & Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Chapman-Gilbert Co., Inc., San Diego, Calif.  
Chemo-Synth Products, Los Angeles, Calif.  
Chipman Chemical Co., Bound Brook, N.J.  
Dow Chemical Co., Midland, Mich.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Glyco Products Co., Inc., Brooklyn, N.Y.  
Koller Chemical Works, Newark, N.J.  
O. E. Linck Co., Inc., Clifton, N.J.  
Lukon, Inc., Leominster, Mass.  
Monsanto Chemical Co., St. Louis, Mo.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.  
Planetary Chemical Co., Creve Coeur, Mo.  
Plant Products Corp., Blue Point, N.Y.  
Dr. Salisbury Laboratories, Charles City, Iowa  
Sherwin-Williams Co., Cleveland, Ohio

Standard Agri. Chem. Inc., Hoboken, N.J.  
U. S. Rubber Co., Naugatuck Chemicals Div., New York, N.Y.  
Veith Chemical Co., Fresno, Calif.

#### Ammonium Sulfamate

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Miller Chem. & Fertilizer Corp., Baltimore, Md.

#### Butyl Phenol

California Spray-Chem. Corp., Richmond, Calif., & Elizabeth, N.J.  
Dow Chemical Co., Midland, Mich.

#### Sodium Arsenite

California Spray-Chemical Corp., Richmond, Calif., & Elizabeth, N.J.  
Central Chemical Corp., Hagerstown, Md.  
Chipman Chemical Co., Inc., Bound Brook, N.J.  
Geigy Inc., New York, N.Y.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
James Good Co., Philadelphia, Pa.  
Nico-Dust Mfg. Co., Div. of Stauffer Chem. Co., San Francisco, Calif.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.  
Sherwin-Williams Co., Cleveland, Ohio

#### Sodium Chlorate

California Spray-Chemical Corp., Richmond, Calif., & Elizabeth, N.J.  
Chipman Chemical Co., Bound Brook, N.J.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Merck & Co., Inc., Rahway, N.J.  
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.

#### Sodium Salt of Dinitro-Ortho-Cresol

Sherwin-Williams Co., Cleveland, Ohio  
Standard Agri. Chem. Inc., Hoboken, N.J.

### FERTILIZERS

#### AGRICULTURAL LIME

Celotex Corp., Chicago, Ill.  
Central Chemical Corp., Hagerstown, Md.  
Marble Cliff Quarries Co., Columbus, Ohio  
National Gypsum Co., Buffalo, N. Y.  
Ohio Hydrate & Supply Co., Woodville, Ohio  
Scioto Lime & Stone Co., Delaware, Ohio  
United States Gypsum Co., Chicago, Ill.  
Warner Co., Bellefonte Div., Bellefonte, Pa.  
Woodville Lime Products Co., Toledo, Ohio  
Philipp Brothers, Inc., New York, N.Y.  
Whittaker, Clark & Daniels, Inc., New York, N.Y.

#### AMMONIUM NITRATE

American Cyanamid Co., Fertilizer Div., New York, N.Y.

#### BORAX

American Potash & Chem. Corp., New York, N.Y.  
Central Chemical Corp., Hagerstown, Md.  
Pacific Coast Borax Co., New York, N.Y.  
Philipp Brothers, Inc., New York, N.Y.  
Stauffer Chemical Co., New York, N.Y.

#### CALCIUM CYANAMIDE

American Cyanamid Co., Fertilizer Div., New York, N.Y.

#### CALCIUM NITRATE

Synthetic Nitrogen Prod. Corp., New York, N.Y.

#### FLORIDA NATURAL PHOSPHATE

American Cyanamid Co., Fertilizer Div., New York, N.Y.

#### FLORIDA PHOSPHATE ROCK

American Cyanamid Co., Fertilizer Div., New York, N.Y.

#### GYPSUM

Celotex Corp., Chicago, Ill.  
United States Gypsum Co., Chicago, Ill.  
Whittaker Clark & Daniels, Inc., New York, N.Y.

#### MAGNESIUM SULPHATE

Central Chemical Corp., Hagerstown, Md.  
Dow Chemical Co., Midland, Mich.  
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
James Good Co., Philadelphia, Pa.  
Harshaw Chemical Co., Cleveland, Ohio  
Mallinckrodt Chemical Works, St. Louis, Mo.

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on Page 36



### WEEDEX

Kills Unightly Weeds  
Quickly and Easily  
**JAMES GOOD COMPANY**  
2101 E. Susquehanna Avenue  
Philadelphia 25, Pa.

Used successfully in destroying weeds, wild grass and undesirable growth in tennis courts, driveways, walks, gutters, and athletic fields. Many other areas can be kept free of vegetable growth with Weedex.

A few territories still available.

**AMERICAN FRUIT GROWER**

# FERTILIZERS

## MANGANESE SULPHATE

J. C. Baker Chemical Co., Phillipsburg, N. J.  
Carus Chemical Co., La Salle, Ill.  
Central Chemical Corp., Hagerstown, Md.  
E. I. du Pont de Nemours & Co., Inc., Grasse-  
selli Chem. Dept., Wilmington, Del.  
Harshaw Chemical Co., Cleveland, Ohio  
Mallinckrodt Chemical Wks., St. Louis, Mo.  
Merk & Co., Inc., Rahway, N.J.  
Miller Chemical & Fertilizer Corp., Baltimore,  
Md.

Tennessee Corp., Atlanta, Ga.  
Tennessee Eastman Corp., Kingsport, Tenn.  
Van Waters & Rogers, Inc., Portland, Ore.

## MINERALIZERS

Central Chemical Corp., Hagerstown, Md.  
Tennessee Corp., Atlanta, Ga.

## MIXED FERTILIZERS, COMMERCIAL

American Agricultural Chem. Co., New York,  
N.Y.

Armour Fertilizer Works, Atlanta, Ga.  
Central Chemical Corp., Hagerstown, Md.  
Davison Chemical Co., Baltimore, Md.  
International Minerals & Chem. Corp., Chicago,  
Ill.

Jean Maclean, Bridgeton, Ind.  
McCormick & Co., Inc., Baltimore, Md.  
Miller Chemical & Fertilizer Corp., Baltimore, Md.  
Planetary Chemical Co., Creve Coeur, Mo.  
Standard Wholesale Phosphate & Acid Works,  
Inc., Baltimore, Md.

Swift & Co., Plant Food Div., Chicago, Ill.  
Tennessee Corp., Atlanta, Ga.  
Wilson & Co., Chicago, Ill.  
Woodville Lime Products Co., Toledo, Ohio

## NITRATE OF POTASH

Battelle & Renwick, New York, N.Y.  
Chilean Nitrate Sales Corp., New York, N.Y.  
Miller Chem. & Fertilizer Corp., Baltimore, Md.

## NITRATE OF SODA

Barrett Div., Allied Chemical & Dye Corp., New  
York, N.Y.

Chilean Nitrate Sales Corp., New York, N.Y.  
Miller Chemical & Fertilizer Corp., Baltimore, Md.  
Smith Agricultural Chemical Co., Columbus,  
Ohio

Swift & Co., Plant Food Div., Chicago, Ill.

## POTASH SALTS

American Potash & Chemical Corp., New York,  
N.Y.

International Minerals & Chem. Corp., Chicago,  
Ill.

Potash Co. of America, New York, N.Y.

United States Potash Co., New York, N. Y.

## SULPHATE OF AMMONIA

Barrett Div., Allied Chemical & Dye Corp., New  
York, N.Y.

Central Chemical Corp., Hagerstown, Md.  
DeBardleben Coal Corp., Birmingham, Ala.

Domestic Coke Corp., Fairmont, W. Va.  
Interlake Chemical Corp., Cleveland, Ohio

Koppers Co., Inc., Pittsburgh, Pa.  
Miller Chemical & Fertilizer Corp., Baltimore, Md.

Nitrogen Products Inc., New York, N.Y.  
Smith Agricultural Chemical Co., Columbus,  
Ohio

## SULPHUR

California Spray-Chemical Corp., Richmond,  
Calif., & Elizabeth, N.J.

Central Chemical Corp., Hagerstown, Md.  
Miller Chemical & Fertilizer Corp., Baltimore,  
Md.

National Sulphur Co., Inc., New York, N.Y.  
Niagara Chemical Div., Food Machinery Corp.,  
Middleport, N.Y.

Stauffer Chemical Co., New York, N.Y.  
Woolfolk Chemical Works, Ltd., Ft. Valley, Ga.

Woolfolk Chemical Works, Ltd., Ft. Valley, Ga.

## SUPERPHOSPHATE

American Agricultural Chemical Co., New York,  
N.Y.

Central Chemical Corp., Hagerstown, Md.  
Davison Chemical Co., Baltimore, Md.

Farmers Fertilizer Co., Columbus, Ohio  
Federal Chemical Co., Louisville, Ky.

International Agricultural Chemical Co., New  
York, N.Y.

Standard Wholesale Phosphate & Acid Works,  
Inc., Baltimore, Md.

Summers Fertilizer Co., Inc., Baltimore, Md.  
Swift & Co., Plant Food Div., Chicago, Ill.

Tennessee Corp., Atlanta, Ga.

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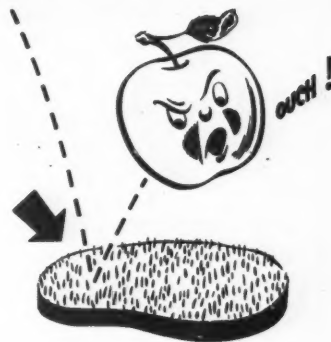
Tennessee Corp., Atlanta, Ga.

Tennessee Corp., Atlanta, Ga.

Fruit Growers know that the  
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They know, too, that Niagara STIK,  
LIQUI-STIK and STIK-DUST assure:

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SIZE • COLOR  
QUALITY  
FLAVOR • PRICE

Prevent premature drop by spraying or dusting with these depend-  
able, time-tested Niagara Hormone products. Gives fruit 4 to 7 days  
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when buying copper dust  
or spray mixtures.



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TC CORPORATION

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Atlanta, Georgia

TENNESSEE CORPORATION

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on page 36

JULY, 1948



Dependable  
**CHAMPION**  
 America's Favorite Spark Plug



Pack a lunch and pile the family into the car, and all out-of-doors is yours to enjoy through the mere turn of an ignition key. The key to good ignition and a carefree day is the most dependable spark plug you can buy. Be sure you have dependable Champion Spark Plugs in your engine. On the farm where the average user is a multiple spark plug user—for cars, trucks, tractors, and stationary engines—the outstanding dependability of Champions has made them the overwhelming favorites for every engine.

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 Bonide Chemical Co., Utica, N.Y.  
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 Carbola Chemical Co., Inc., Natural Bridge, N.Y.  
 E. I. Du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
 General Chemical Div., Allied Chem. & Dye Corp., New York, N.Y.  
 K-R-O Co., Springfield, Ohio  
 O. E. Linck Co., Inc., Clifton, N.J.  
 Jean Maclean, Bridgeton, Ind.  
 Mallinckrodt Chemical Works, St. Louis, Mo.  
 Monsanto Chemical Co., St. Louis, Mo.  
 Rose Exterminator Co., Chicago, Ill.  
 Sennewald Drug Co., Inc., St. Louis, Mo.  
 D. B. Smith & Co., Inc., Utica, N.Y.  
 Sudbury Laboratory, So. Sudbury, Mass.

**RODENT REPELLENTS**

M. J. Beck Co., Lansing, Mich.  
 California Spray-Chemical Corp., Richmond, Calif. & Elizabeth, N.J.  
 Carbide & Carbon Chemicals Corp., Unit of Union Carbide & Carbon Corp., New York, N.Y.  
 Clarion Development Co., Inc., Clarion, Pa.  
 Crystal Soap & Chemical Co., Inc., Philadelphia, Pa.  
 E. L. Eckerley, Orchardview, Noblesville, Ind.  
 Hammond Paint & Chemical Co., Beacon, N.Y.  
 O. E. Linck Co., Inc., Clifton, N.J.  
 J. Livingstone, Jr., Milwaukee, Wis.  
 Sennewald Drug Co., Inc., St. Louis, Mo.  
 Sudbury Laboratory, So. Sudbury, Mass.  
 Rollin H. Tabor, Mt. Vernon, Ohio  
 Wisconsin Pharmacal Co., Milwaukee, Wis.

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U. S. Pat. Off.—April 29, 1947

**Saves EVERY Tree—Saves TIME**

The Perfect Varnish protection. Used for ALL Bark-eating animals. Repellent for Flathead borer, sunscald, winterkill. Used with NO losses at Noblesville since 1942. Sold in 44 states, Canada and Mexico. Liberal discount to agents, commercial orchardists and nurserymen. Powder—\$1 package postpaid—50 young trees. Applied in 30 minutes—lasts a year. Six lbs. \$5, postpaid. Also used in 10% proportion in ANY Dust Application on any garden vegetable. Rain will not wash off. LIQUID TRE-TEX in Pint or Quart Friction Top Cans. Ready to apply. Not less than 12 qts. or 24 pints—\$10. Shipped by EX-PRESS—NOT prepaid. WRITE or ORDER TODAY.

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A powerful story of farming on poor, overworked and eroded soil. The tragedy of creatures of habit and custom who refused to accept modern soil management and to their own ultimate destruction is the theme of this inspiring and interesting book. Joe Cocannouer, the author, is the Father of our present system of teaching vocational agriculture in our public schools. Many families which the author describes have their counterparts in every agricultural community. No one can read this book without becoming a better farmer and converting the bitter vintage of grapes into sound and mellow fruit.

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Co., Inc., Gra-  
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Chem. & Dye

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St. Louis, Mo.  
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Ill.  
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Corp., Unit of  
p., New York,  
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Philadelphia,  
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You know what you're doing

when you spray the old, reliable

REG. U. S. PAT. OFF.

FRUITONE

FOR PRE-HARVEST DROP

Fruitone was the first hormone spray to be put on the market. It has 8 years of successful use behind it. It is an accepted, dependable product that gives the results you're looking for.

### LIQUID OR POWDER

Fruitone can be obtained in liquid or powder form . . . whichever you and your State Experiment Station prefer.

**ORDER NOW.** The average tree must be sprayed at least ten days before picking time. Order your supply now from your dealer, or write to us direct.

**American Chemical Paint Company**  
Agricultural Chemicals Division  
Ambler, Pa.

Send for your Maturity Schedule, telling you the best time to spray for every variety of apple and pear.





# SPRAYING & DUSTING EQUIPMENT



## SPRAYERS

### AIR BLAST

Buffalo Turbine Agri. Equip. Co., Inc., Gowanda, N.Y.  
John Bean Mfg. Co., Lansing, Mich.  
Food Machinery Corp., San Jose, Calif.  
The F. E. Myers & Bro. Co., Ashland, Ohio  
Robinson Fan Corp., Gilroy, Calif.

### CONCENTRATE APPLICATORS

#### FOG GENERATORS

Todd Shipyards Corp., New York, N.Y.

#### MIST SPRAYERS

Feller-Jones Mist Blower, Inc., New York, N.Y.  
Fitzhenry-Guptill Co., E. Cambridge, Mass.  
Lawrence Aero-Mist Sprayer Co., Greenfield, Mass.

#### SPRAY DUSTERS

Buffalo Turbine Agr. Equip. Co., Inc., Gowanda, N.Y.  
Naco Mfg. Co., Successors to Root Mfg. Co., Huntington Park, Calif.  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.

#### STEAM GENERATORS

Besler Corp., Emeryville, Calif.

#### HAND

Armstrong Products Corp., Huntington, W. Va.  
Campbell-Hausfeld Co., Harrison, Ohio  
Champion Sprayer Co., Detroit, Mich.  
Dobbins Mfg. Co., Elkhart, Ind.  
A. B. Farquhar Co., York, Pa.  
Field Force Mfg. Co., Phoenixville, Pa.  
Hardie Mfg. Co., Hudson, Mich.  
H. D. Hudson Mfg. Co., Chicago, Ill.  
A. M. Leonard & Son, Piqua, Ohio  
Lofstrand Co., Rockville, Md.  
The F. E. Myers & Bro. Co., Ashland, Ohio  
D. B. Smith & Co., Inc., Utica, N.Y.  
Sprayer Supply Mfg. Co., Grand Rapids, Mich.

#### POWER

John Bacon Co., Gasport, N. Y.  
John Bean Mfg. Co., Lansing, Mich.  
Bean-Cutler Div., F.M.C., San Jose, Calif.  
Decker Industries, Janesville, Wis.  
Dobbins Mfg. Co., Elkhart, Ind.  
Eureka Mower Co., Utica, N.Y.  
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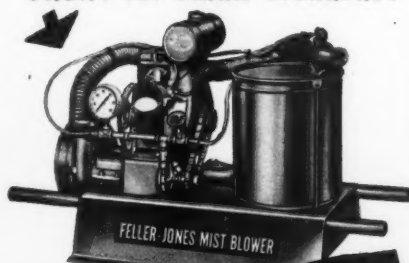
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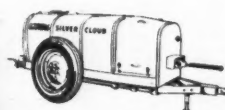
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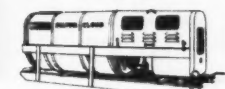
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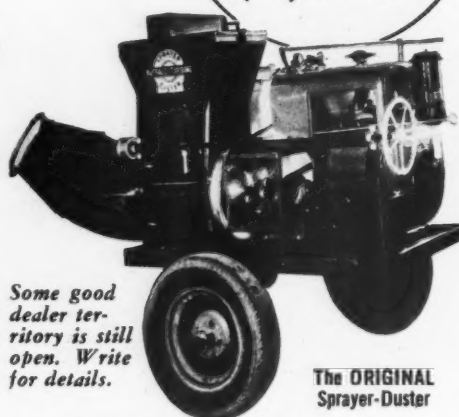
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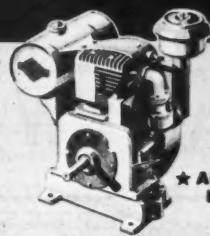
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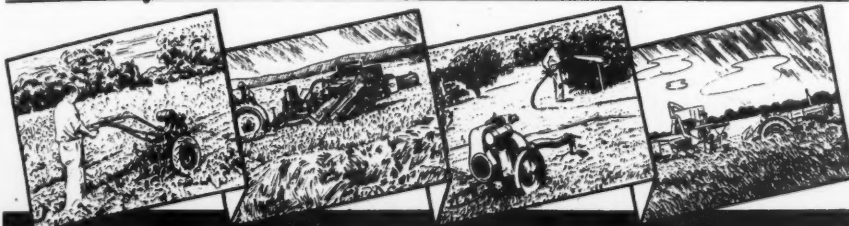
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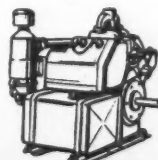
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Bean-Cutler Div., F.M.C., San Jose, Calif.  
A. B. Farquhar Co., York, Pa.  
Field Force Mfg. Co., Phoenixville, Pa.  
Friend Mfg. Co., Gasport, N.Y.  
Hardie Mfg. Co., Hudson, Mich.  
The F. E. Myers & Bro. Co., Ashland, Ohio

### RODS

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Dobbins Mfg. Co., Elkhart, Ind.  
A. B. Farquhar Co., York, Pa.  
Field Force Mfg. Co., Phoenixville, Pa.  
Friend Mfg. Co., Gasport, N.Y.  
W. L. Hamilton & Co., Bangor, Mich.  
Hardie Mfg. Co., Hudson, Mich.  
The F. E. Myers & Bro. Co., Ashland, Ohio  
Tyson Orchard Service, Flora Dale, Pa.  
Universal Power Sprayer Co., Inc., Plymouth, Mich.

### SPRAY HOSE FITTINGS

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John Bean Mfg. Co., Lansing, Mich.  
Bean-Cutler Div., F.M.C., San Jose, Calif.  
Broadway Rubber Mfg. Co., Louisville, Ky.  
Chase Brass & Copper Co., Waterbury, Conn.  
Dobbins Mfg. Co., Elkhart, Ind.  
A. B. Farquhar Co., York, Pa.  
Field Force Mfg. Co., Phoenixville, Pa.  
Friend Mfg. Co., Gasport, N.Y.  
B. F. Goodrich Co., Akron, Ohio  
Grand Traverse Orchard Supply Co., Inc., Traverse City, Mich.  
W. L. Hamilton & Co., Bangor, Mich.  
Hardie Mfg. Co., Hudson, Mich.  
A. M. Leonard & Son, Piqua, Ohio  
The F. E. Myers & Bro. Co., Ashland, Ohio  
Niagara Chemical Div., Food Machinery Corp., Middleport, N.Y.  
Punch-Lok Co., Chicago, Ill.  
Sprayer Supply Mfg. Co., Grand Rapids, Mich.  
Spray Hose Associates, Div. Neff-Perkins Co., Cleveland, Ohio  
B. C. Tillinghast Rubber Co., Philadelphia, Pa.  
Tinnerman Products, Inc., Cleveland, Ohio  
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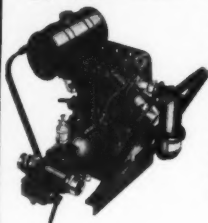
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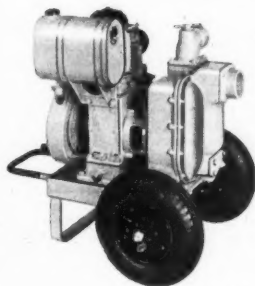
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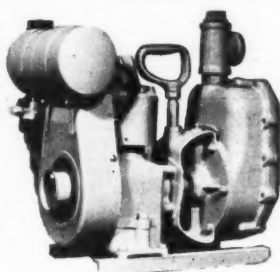
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#### Goggles

Chicago Eye Shield Co., Chicago, Ill.  
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#### Masks

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Binks Mfg. Co., Chicago, Ill.  
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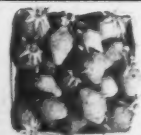
# NURSERY STOCK



## Fruit Trees

Ackerman Nursery, Bridgman, Mich.  
 Allen's Nurseries & Seed House, Geneva, Ohio  
 Andrews Nursery Co., Faribault, Minn.  
 Armstrong Nurseries, Ontario, Calif.  
 O. A. D. Baldwin Nursery, Bridgman, Mich.  
 W. A. Bents Nurseries, Cresco, Iowa  
 Berhow Nurseries, Huxley, Iowa  
 Bohlender Nurseries Co., Tipp City, Ohio  
 Bountiful Ridge Nurseries, Princess Anne, Md.  
 Boyd Bros. Nurseries, McMinnville, Tenn.  
 Bridgman Nursery Co., Bridgman, Mich.  
 Buntings' Nurseries, Inc., Selbyville, Del.  
 California Nursery Co., Niles, Calif.  
 Call's Nurseries, Perry, Ohio  
 Champion Nurseries, Perry, Ohio  
 Chase Brothers Co., Geneva, N.Y.  
 Chattanooga Nurseries, Chattanooga, Tenn.  
 Cole Nursery Co., Painesville, Ohio  
 Columbia & Okanogan Nursery Co., Wenatchee, Wash.  
 Conger's Nurseries, Smithville, Tenn.  
 Cumberland Valley Nurseries, Inc., McMinnville, Tenn.  
 L. V. Doud & Son, Wabash, Ind.  
 Egyptian Nursery Co., Farina, Ill.  
 Emlong's Nursery, Stevensville, Mich.  
 Farmers Wholesale Nursery, Smithville, Tenn.  
 Gem City Vineland Co., Nauvoo, Ill.  
 Golden Eagle Nursery, Golden Eagle, Ill.  
 Grand Island Nurseries, Eustis, Fla.  
 Greening Nursery Co., Monroe, Mich.  
 Carl A. Hansen Nursery, Brookings, S.D.  
 Harrison's Nurseries, Berlin, Md.  
 Hawk & Son Nursery, Beach City, Ohio  
 Heberle Nursery Co., Rochester, N.Y.  
 Howard-Hickory Nursery, Hickory, N.C.  
 Ilgenfritz Nurseries, Inc., Monroe, Mich.  
 E. W. Jones Nursery Co., Woodlawn, Va.  
 J. F. Jones Nurseries, Lancaster, Pa.  
 R. M. Kellogg Co., Three Rivers, Mich.  
 Kelly Bros. Nurseries, Dansville, N.Y.  
 Knight's Nurseries, Elmhurst, Ill.  
 Krider Nurseries, Inc., Middlebury, Ind.  
 Lake's Shenandoah Nurseries, Shenandoah, Ia.  
 Lamatonk Nurseries, Neshanic Station, N.J.  
 Maloney Bros. Nursery Co., Dansville, N.Y.  
 Markham's Nursery, Florida, Ill.  
 Mason Kentucky Wonder Nursery Co., Smithville, Tenn.  
 Massee Place Nursery, Marshallville, Ga.  
 Thomas B. Meehan Co., Dresher, Pa.  
 J. E. Miller Nurseries, Canandaigua, N.Y.  
 George A. Morse, Williamson, N.Y.  
 Mount Arbor Nurseries, Shenandoah, Iowa  
 Naughton Farms, Inc., Waxahachie, Tex.  
 New Jersey Peach Council, Princeton, N.J.  
 Peach Ridge Farms, Clemson, S.C.  
 Ponzer Nursery, Rolla, Mo.  
 Princeton Nurseries, Princeton, N.J.  
 Rokely & Son, Bridgman, Mich.  
 W. N. Scarff's Sons, New Carlisle, Ohio  
 South Michigan Nursery, New Buffalo, Mich.  
 F. C. Stahelin & Son, Bridgman, Mich.  
 Stark Bros.' Nurseries & Orchards Co., Louisiana, Mo.  
 Stern's Nurseries, Geneva, N.Y.  
 Storrs & Harrison, Painesville, Ohio  
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 West Hill Nurseries, Fredonia, N.Y.  
 White Rose Seed & Nursery Co., York, Pa.  
 Whitford Nursery, Farina, Ill.  
 Willis Nurseries, Ottawa, Kans.  
 Zilke Nursery, Baroda, Mich.

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Armstrong Nurseries, Ontario, Calif.  
 Bass Pecan Co., Lumberton, Miss.  
 Berhow Nurseries, Huxley, Iowa  
 Bernath's Nursery, Poughkeepsie, N. Y.  
 Bountiful Ridge Nurseries, Princess Anne, Md.  
 Boyd Bros. Nurseries, McMinnville, Tenn.  
 Buntings' Nurseries, Inc., Selbyville, Del.  
 California Nursery Co., Niles, Calif.  
 Chase Bros. Co., Geneva, N.Y.  
 Columbia & Okanogan Nursery Co., Wenatchee, Wash.  
 H. H. Corsan, Hillsdale, Mich.  
 Corsicana Nursery, Corsicana, Texas  
 Gerardi Nurseries, O'Fallon, Ill.  
 Gold Chestnut Nursery, Cowen, W. Va.  
 Griffing Nurseries, Beaumont, Texas  
 W. Halbert, Oxford, N.Y.  
 Harrison's Nurseries, Berlin, Md.  
 Hawk & Son Nursery, Beach City, Ohio  
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 E. W. Jones Nursery Co., Woodlawn, Va.  
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 Markham's Nursery, Xenia, Ill.  
 Thomas B. Meehan Co., Dresher, Pa.  
 Michigan Nut Nursery, Union City, Mich.  
 J. E. Miller, Nurseries, Canandaigua, N.Y.  
 Nut Tree Nurseries, Downingtown, Pa.  
 W. N. Scarff's Sons, New Carlisle, Ohio  
 Jay Smith Nut Tree Nursery, Chester, N.Y.  
 Snyder Bros. Inc., Center Point, Iowa  
 Spring Hill Nurseries, Tipp City, Ohio  
 Stark Bro's Nurseries & Orchards Co., Louisiana, Mo.  
 Storrs & Harrison, Painesville, Ohio  
 Texas Pecan Nursery, Inc., Tyler, Texas  
 Virginia Tree Farms, Woodlawn, Va.  
 Waynesboro Nurseries, Waynesboro, Va.

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 Mount Arbor Nurseries, Shenandoah, Iowa  
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 A. Willis & Co., Ottawa, Kans.

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 Burgess Seed and Plant Co., Galesburg, Mich.  
 W. Atlee Burpee Co., Philadelphia, Pa.  
 Champion Nurseries, Perry, Ohio  
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Maloney Bros. Nursery Co., Dansville, N.Y.  
W. N. Scarff's Sons, New Carlisle, Ohio  
Stern's Nurseries, Geneva, N. Y.  
U. S. Espalier Nursery Co., Inc., Portland, Ore.  
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Hubbard Apiaries, Onsted, Mich.  
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Stover Apiaries, Mayhew, Miss.

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Clover Bee Farms, Hessmer, La.  
Dadant & Sons, Hamilton, Ill.  
Dupuis Apiaries, Breaux Bridge, La.  
Flowers Bee Co., Jesup, Ga.  
Girardeau Apiaries, Tifton, Ga.  
Highland Apiaries, West Elkton, Ohio  
Jackson Apiaries, Funston, Ga.  
Jensen's Apiaries, Macon, Miss.  
The Walter T. Kelley Co., Paducah, Ky.  
Prairie View Honey Co., Detroit, Mich.  
The Puett Co., Hahira, Ga.  
Rapides Apiaries, Winnfield, La.  
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Stoller Apiaries, Latty, Ohio  
Stover Apiaries, Mayhew, Miss.  
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Valley Bee & Honey Co., Westlaco, Texas  
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# TILLAGE EQUIPMENT



## Basin Listers

B. F. Avery & Sons Co., Inc., Louisville, Ky.  
J. I. Case Co., Racine, Wis.  
International Harvester Co., Chicago, Ill.  
Massey-Harris Co., Racine, Wis.  
Minneapolis-Moline Power Implement Co.,  
Minneapolis, Minn.  
Oliver Farm Equipment Co., Chicago, Ill.

## Brush Rakes

J. D. Tower & Sons Co., Mendota, Ill.  
Wyatt Mfg. Co., Salina, Kans.

## Cultivators and Harrows

Aerco Corp., Burbank, Calif.  
S. L. Allen & Co., Inc., Philadelphia, Pa.  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Ariens Co., Brillion, Wis.  
Blount Plow Works, Evansville, Ind.  
Jim Brown Stores, Inc., Cleveland, Ohio  
Bucher & Gibbs Plow Co., Philadelphia, Pa.  
J. I. Case Co., Racine, Wis.  
Centaur Tractor Corp., Greenwich, Ohio  
Climax Engineering Co., Clinton, Iowa  
James Cunningham Son & Co., Rochester, N.Y.  
Cutaway Harrow Co., Higganum, Conn.  
John Deere, Moline, Ill.  
Dempster Mill Mfg. Co., Beatrice, Nebr.  
Empire Plow Co., Cleveland, Ohio  
Farm & Tractor Equipment Specialties Co., Eau  
Claire, Mich.  
Farm Tools, Inc., Mansfield, Ohio  
A. B. Farquhar Co., York, Pa.

Harry Ferguson, Inc., Detroit, Mich.  
Fresno Agricultural Works, Fresno, Calif.  
International Harvester Co., Chicago, Ill.  
Love Tractor, Inc., Eau Claire, Mich.  
Massey-Harris Co., Racine, Wis.  
Minneapolis-Moline Power Implement Co., Min-  
neapolis, Minn.  
Ohio Cultivator Co., Bellevue, Ohio  
Oliver Farm Equipment Co., Chicago, Ill.  
Orkil, Inc., Hartford, Conn.  
Seaman Motors, Inc., Milwaukee, Wis.  
J. D. Tower & Sons Co., Mendota, Ill.  
Townner Mfg. Co., Santa Ana, Calif.  
Wiard Plow Co., Batavia, N. Y.

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S. L. Allen & Co., Inc., Philadelphia, Pa.  
J. I. Case Co., Racine, Wis.  
John Deere, Moline, Ill.  
A. B. Farquhar Co., York, Pa.  
Harry Ferguson, Inc., Detroit, Mich.  
International Harvester Co., Chicago, Ill.  
Massey-Harris Co., Racine, Wis.  
Minneapolis-Moline Power Implement Co., Min-  
neapolis, Minn.  
Oliver Farm Equipment Co., Chicago, Ill.  
Ontario Drill Co., East Rochester, N.Y.  
Peoria Drill & Seeder Co., Peoria, Ill.

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Baldwin-Duckworth, Div. of Chain Belt Co.,  
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Chain Belt Co., Milwaukee, Wis.

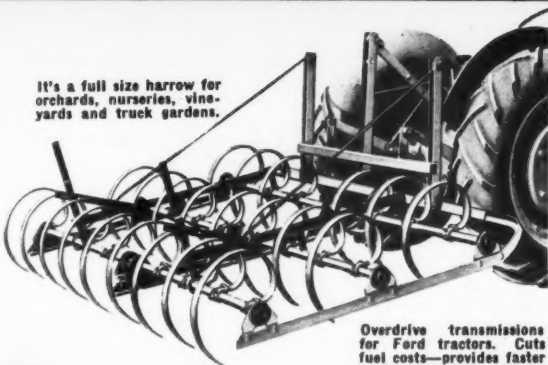
## Explosives

Atlas Powder Co., Wilmington, Del.  
E. I. du Pont de Nemours & Co., Inc., Wilming-  
ton, Del.  
Hercules Powder Co., Wilmington, Del.

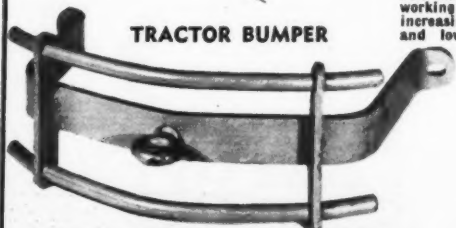
## Fertilizer Distributors

S. L. Allen & Co., Inc., Philadelphia, Pa.  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
J. I. Case Co., Racine, Wis.  
Cyclone Seeder Co., Urbana, Ind.  
John Deere, Moline, Ill.  
Farm Tools, Inc., Mansfield, Ohio  
A. B. Farquhar Co., York, Pa.  
Frick Company, Waynesboro, Pa.  
Hampshire Implement Co., Hatfield, Mass.  
International Harvester Co., Chicago, Ill.  
Lyonizer Co., Lakeland, Fla.  
Massey-Harris Co., Racine, Wis.  
Minneapolis-Moline Power Implement Co., Min-  
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Mt. Vernon Implement Co., Mt. Vernon, N.Y.  
New Idea Co., Inc., Coldwater, Ohio  
Ohio Cultivator Co., Bellevue, Ohio  
Oliver Farm Equipment Co., Chicago, Ill.  
Ontario Drill Co., E. Rochester, N.Y.  
Peoria Steel & Wire Co., Inc., Peoria, Ill.  
Smith Agricultural Chemical Co., Columbus,  
Ohio  
Southern Implement Co., Clarksdale, Miss.  
Stahmer Farm Equipment Co., Chicago, Ill.  
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It's a full size harrow for orchards, nurseries, vineyards and truck gardens.



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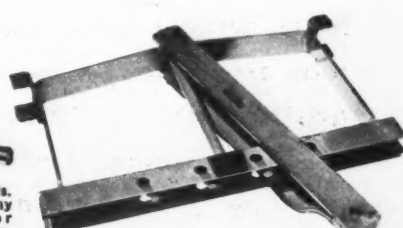
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Attached without tools. Better control for any implement — easier steering and turning. Works on Ford and Ferguson tractors.

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LAWN and GARDEN TRACTOR

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YOU WILL FIND MANY USES FOR THIS PRACTICAL DUMP TRAILER

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GARDEN-ALL TRACTOR, INC.  
Dept. FG, 110 W. Union, Liberty, Indiana

Hoes, Grape and Berry  
Meads Farm Store, Westfield, N.Y.

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
B. F. Avery & Sons Co., Louisville, Ky.  
Bolens Products Co., Milwaukee, Wis.  
J. I. Case Co., Racine, Wis.  
Centaur Tractor Corp., Greenwich, Ohio  
James Cunningham Son & Co., Rochester, N.Y.  
John Deere, Moline, Ill.  
Farm Tools, Inc., Mansfield, Ohio  
Harry Ferguson, Inc., Detroit, Mich.  
Gravely Motor Plow & Cult. Co., Dunbar, W. Va.  
Huber Mfg. Co., Marion, Ohio  
International Harvester Co., Chicago, Ill.  
LeRoi Co., Milwaukee, Wis.  
Massey-Harris Co., Racine, Wis.  
Milwaukee Equipment Mfg. Co., S. Milwaukee, Wis.  
Minneapolis-Moline Power Implement Co., Minneapolis, Minn.  
New Idea Co., Inc., Coldwater, Ohio  
Ohio Cultivator Co., Bellevue, Ohio  
Oliver Farm Equipment Co., Chicago, Ill.  
Power Products Corp., Ardmore, Pa.  
Simplicity Mfg. Co., Port Washington, Wis.  
Turner of Indiana, Inc., Indianapolis, Ind.

### Plows, Disc and Moldboard

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Blount Plow Works, Evansville, Ind.  
Bucher & Gibbs Plow Co., Philadelphia, Pa.  
J. I. Case Co., Racine, Wis.  
Centaur Tractor Corp., Greenwich, Ohio  
James Cunningham Son & Co., Rochester, N.Y.  
Cutaway Harrow Co., Higganum, Conn.  
John Deere, Moline, Ill.  
Empire Plow Co., Cleveland, Ohio  
Farm Tools, Inc., Mansfield, Ohio  
Harry Ferguson, Inc., Detroit, Mich.  
Frick Company, Waynesboro, Pa.  
International Harvester Co., Chicago, Ill.  
Massey-Harris Co., Racine, Wis.  
Minneapolis-Moline Power Implement Co., Minneapolis, Minn.  
Ohio Cultivator Co., Bellevue, Ohio  
Oliver Farm Equipment Co., Chicago, Ill.  
Orkil, Inc., Hartford, Conn.  
Wayne Agri. Works, Inc., Goldsboro, N.C.

### Power Saws

Bennett-Ireland Co., Norwich, N.Y.  
Henry Disston & Sons, Inc., Philadelphia, Pa.  
Folding Sawing Machine Wks., Chicago, Ill.  
Jaques Power Saw Co., Denison, Tex.  
Harry A. Lowther Co., Chicago, Ill.  
Ottawa Mfg. Co., Ottawa, Kans.

### Saw Frames

Jim Brown Stores, Inc., Cleveland, Ohio  
Buller Mfg. Co., Hillsboro, Kans.  
Enterprise Co., Columbiana, Ohio  
Folding Sawing Machine Wks., Chicago, Ill.  
Ottawa Mfg. Co., Ottawa, Kans.

### Scythe, Power

Bolens Products Co., Milwaukee, Wis.  
James Cunningham Son & Co., Rochester, N.Y.  
Gravely Motor Plow & Cult. Co., Dunbar, W. Va.  
Jari Products, Inc., Minneapolis, Minn.  
Simplicity Mfg. Co., Port Washington, Wis.

### Sowers, Hand Seed

Cyclone Seeder Co., Urbana, Ind.

### Stump Pullers

Hercules Mfg. Co., Centerville, Iowa  
Kirstin Co., Escanaba, Mich.  
Puljack Mfg. Corp., Englewood, N.J.

### Terracers

Caterpillar Tractor Co., Peoria, Ill.  
Harry Ferguson, Inc., Detroit, Mich.  
International Harvester Co., Chicago, Ill.

### Tillers, Rotary

Aerco Corp., Burbank, Calif.  
Ariens Co., Brillion, Wis.  
James Cunningham Son & Co., Rochester, N.Y.  
Graham-Paige Motors Corp., York, Pa.  
Milwaukee Equipment Mfg. Co., S. Milwaukee, Wis.  
Seaman Motors, Inc., Milwaukee, Wis.

### Tractor Chains

American Chain Div., American Chain & Cable Co., Inc., Bridgeport, Conn.  
Columbus-McKinnon Chain Co., Tonawanda, N.Y.  
Horner Tractor Sales, Geneva, Ohio

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CLEARs LAND FAST! Powerful 7-HP motor with friction clutch for safe operation. Cuts down timber, brush and hedge; turn blade vertically and saw logs to length. Also furnished with post hole diggers. Has clutch pulley for belt work.



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### CUTS CLOSE TO TREES

You can mow close to fruit trees, under fences and in corners with the JARI Power Scythe. Cuts where other mowers won't. No danger of breaking low branches. 36" sickle cuts weeds, brush, grass 1½" from ground. Follows ground contour. Light weight, self-propelled, easy to handle... one man can cut 4-6 acres in 8 hrs.



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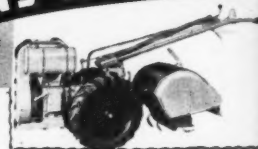


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# TILLAGE EQUIPMENT

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Caterpillar Tractor Co., Peoria, Ill.  
International Harvester Co., Chicago, Ill.  
Oliver Farm Equipment Co., Chicago, Ill.

## Tractors, Garden

S. L. Allen & Co., Inc., Philadelphia, Pa.  
Allied Motors Corp., Minneapolis, Minn.  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
American Farm Machinery Co., Minneapolis, Minn.  
Bolens Products Co., Milwaukee, Wis.  
Bready Tractor & Implement Co., Solon, Ohio  
Centaur Tractor Corp., Greenwich, Ohio  
James Cunningham Son & Co., Rochester, N.Y.  
Eastern Tractor Mfg. Co., Kingston, N.Y.  
Garden-All Tractor, Inc., Liberty, Ind.  
Gravelly Motor Plow & Cult. Co., Dunbar, W. Va.  
Horn & Norris, Inc., Cleveland, Ohio  
International Harvester Co., Chicago, Ill.  
Melin Industries, Cleveland, Ohio  
Milwaukee Equipment Mfg. Co., S. Milwaukee, Wis.  
Mulsifer Corp., Detroit, Mich.  
New Beeman Tractor Co., Minneapolis, Minn.  
Pioneer Mfg. Co., West Allis, Wis.  
Pond Garden Tractor Co., Ravenna, Ohio  
Roths Industries, Inc., Alma, Mich.  
Rototiller, Inc., Troy, N.Y.  
Shaw Mfg. Co., Galesburg, Kans.  
Simplicity Mfg. Co., Port Washington, Wis.  
Standard Engine Co., Minneapolis, Minn.  
Universal Mfg. Co., Indianapolis, Ind.

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- Wheel Decutching for Easy Turning
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Patents Pending



G-26 in 7½ or 10 H.P. Dual Wheels



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WA-36 Wheel Model

- Reverse Attachment (Optional)
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- All Controls on Handlebar

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Address



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MILWAUKEE EQUIP. MFG. CO.  
S. MILWAUKEE, WIS. U.S.A.

JULY, 1948

Walsh Tractor Co., Minneapolis, Minn.

## Tractors, Orchard and Grove

Aerco Corp., Burbank, Calif.  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
J. I. Case Co., Racine, Wis.  
Caterpillar Tractor Co., Peoria, Ill.  
Dearborn Motors Corp., Detroit, Mich.  
John Deere, Moline, Ill.  
Engineering Products Co., Milwaukee, Wis.  
Fate-Root-Heath Co., Plymouth, Ohio  
Harry Ferguson, Inc., Detroit, Mich.  
Huber Mfg. Co., Marion, Ohio  
International Harvester Co., Chicago, Ill.  
Massey-Harris Co., Racine, Wis.  
Milwaukee Equipment Mfg. Co., S. Milwaukee, Wis.  
Minneapolis-Moline Power Implement Co., Minneapolis, Minn.  
Oliver Farm Equipment Co., Chicago, Ill.

## Tractors, Track-Type

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Caterpillar Tractor Co., Peoria, Ill.  
International Harvester Co., Chicago, Ill.  
Oliver Farm Equipment Co., Chicago, Ill.  
U. S. Tractor Sales Div., Inc., Peoria, Ill.

## Tractor Seat

Fleischer & Schmid Corp., Columbus, Nebr.  
Monroe Auto Equipment Co., Monroe, Mich.  
Streator Dependable Mfg. Co., Streator, Ill.

## Tractors, Wheel

S. L. Allen & Co., Inc., Philadelphia, Pa.  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
J. I. Case Co., Racine, Wis.  
Centaur Tractor Corp., Greenwich, Ohio  
Dearborn Motors Corp., Detroit, Mich.  
John Deere, Moline, Ill.  
Fate-Root-Heath Co., Plymouth, Ohio  
Harry Ferguson, Inc., Detroit, Mich.  
Ford Motor Co., Dearborn, Mich.  
Frick Company, Waynesboro, Pa.  
Huber Mfg. Co., Marion, Ohio  
International Harvester Co., Chicago, Ill.  
Massey-Harris Co., Racine, Wis.  
Minneapolis-Moline Power Implement Co., Minneapolis, Minn.  
Oliver Farm Equipment Co., Chicago, Ill.

## Tree Moving Equipment

Hercules Mfg. Co., Centerville, Iowa  
Chas. F. Irish Co., Inc., Cleveland, Ohio  
Williams & Harvey Nurseries Co., Kansas City, Kans.

## Wagons, Orchard

Electric Wheel Co., Quincy, Ill.  
Gramm Trailer Corp., Delphos, Ohio  
Perfection Steel Body Co., Galion, Ohio  
Thomas Truck & Caster Co., Keokuk, Iowa

## Wheels

Electric Wheel Co., Quincy, Ill.  
French & Hecht, Inc., Davenport, Iowa  
Geneva Metal Wheel Co., Geneva, Ohio  
The F. E. Myers & Bro. Co., Ashland, Ohio

## Weed Hogs

Babcock Mfg. Co., Leonardsville, N.Y.  
S. E. McCune & Co., New Waterford, Ohio

# MAINTENANCE EQUIPMENT

## DRILL PRESSES, LATHES, MILLING MACHINES, SHAPERS

Atlas Press Co., Kalamazoo, Mich.  
Boice-Crane Co., Toledo, Ohio  
Delta Mfg. Co., Milwaukee, Wis.  
Shelden Machine Co., Inc., Chicago, Ill.  
South Bend Lathe Works, South Bend, Ind.

## ELECTRIC PLANTS

Caterpillar Tractor Co., Peoria, Ill.  
Delco Appliance Corp., Rochester, N.Y.  
Fairbanks, Morse & Co., Chicago, Ill.  
General Electric Co., Schenectady, N.Y.  
Kewanee Private Utilities, Kewanee, Ill.  
Kohler Co., Kohler, Wis.  
LeRoi Co., Milwaukee, Wis.  
United Motors Service, Div. of General Motors Corp., Detroit, Mich.  
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

## LUBRICATING EQUIPMENT

Alemite Div., Stewart-Warner Corp., Chicago, Ill.

Aro Equipment Corp., Bryan, Ohio  
Gray Co., Inc., Minneapolis, Minn.  
Lincoln Engineering Co., St. Louis, Mo.

## WELDERS

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Forney Mfg. Co., Fort Collins, Colo.  
General Electric Co., Schenectady, N.Y.  
Hobart Bros. Co., Troy, Ohio  
Lincoln Electric Co., Cleveland, Ohio  
Magic Welder Mfg. Co., New York, N.Y.  
Marquette Mfg. Co., Minneapolis, Minn.  
Miller Electric Mfg. Co., Richmond, Ind.  
Trindl Products, Ltd., Chicago, Ill.  
U.S. Electric Welder Corp., Toledo, Ohio



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Four spray nozzles, directly behind the cutter bar, spray the chemical right down to the center of the freshly cut plants. It reaches all of them.

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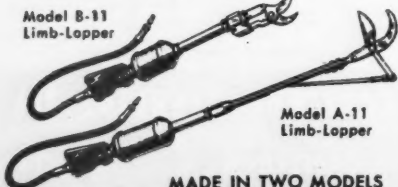
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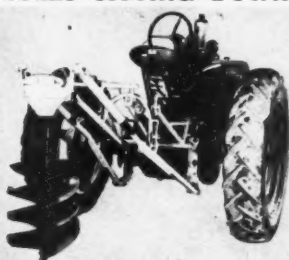
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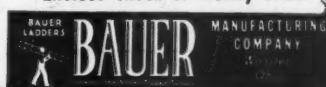
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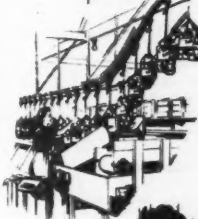
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MARINETTE & MENOMINEE  
BOX COMPANY  
Marinette, Wis.

## BASKETS, WOOD

John Bacon Co., Gasport, N.Y.  
Barden & Robeson Corp., Lockport, N.Y.  
Barden & Robeson Corp., Penn Yan, N.Y.  
F. D. Croce & Co., Inc., New York, N.Y.  
Cummer-Graham Co., Paris, Texas  
Frank L. Deaner & Son, Benton Harbor, Mich.  
Evansville Basket & Crate Co., Evansville, Ind.  
F. W. Harrison & Son, Painesville, Ohio  
Fred Leighton's Mexican Imports, New York, N.Y.  
Marietta Fruit Package & Lumber Co., Marietta, Ohio  
Marvil Package Co., Laurel, Del.  
Paducah Box & Basket Co., Paducah, Ky.  
Pierce-Williams Co., South Haven, Mich.  
H. L. Rapp & Son, Carpentersville, N.J.  
Rio Grande Importing Co., Brownsville, Texas  
Ripley Box & Basket Co., Inc., Ripley, Tenn.  
Roberts-Liggett Co., Metropolis, Ill.  
Sodus Basket Co., Sodus, N.Y.  
Tyson Orchard Service, Flora Dale, Pa.  
Webster Basket Co., Webster, N.Y.

## PROTECT — DECORATE

With

### R.T.R. PAPER AND EQUIPMENT

CURVED FOLDED FRINGES  
SHREDDED OIL PAPER  
WRAPS

LINERS CUSHIONS CAPS FACERS TUBS TURNERS

RICE, TREW & RICE COMPANY  
BIGLERVILLE, PA.

Orlando, Fla.

Salem, Ill.

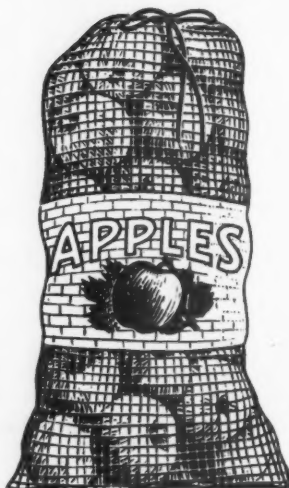


## 2 to 1 FAVORITE

over any other package for apples

That's how 2,367 housewives and 790 market managers voted in a recent survey. With six types of packages to choose from, 35.6% of the people interviewed preferred open-mesh bags for apples over all other types of containers.

Bemis Consumer-Size Open-Mesh Bags help you turn this customer preference into sales. Use them to dress up your apples. You sell more that way.



# BEMIS

GENERAL OFFICES—ST. LOUIS



Offices in  
principal cities

"AMERICA'S NO. 1 BAG MAKER"

Consult Alphabetical Index  
on Page 36

## BOX SHOOKS

Acushnet Saw Mills Co., New Bedford, Mass.  
F. D. Croce & Co., Inc., New York, N.Y.  
Cummer-Graham Co., Paris, Tex.  
General Box Co., Chicago, Ill.  
Green Co., Inc., New York, N.Y.  
Marinette & Menominee Box Co., Marinette, Wis.  
Maxwell Brothers, Inc., Chicago, Ill.  
Mell Lumber Co., Philadelphia, Pa.  
National Wooden Box Association, Washington, D.C.  
New England Box Co., New York, N.Y.  
Rathborne, Hair & Ridgway Co., Chicago, Ill.  
Smeed Box Co., Cleveland, Ohio  
Spruce Veneer Package Corp., Puyallup, Wash.

## BOXES AND CRATES, BERRY

American Box Board Co., Grand Rapids, Mich.  
Ashtabula Corrugated Box Co., Ashtabula, Ohio  
Berlin Fruit Box Co., Berlin Heights, Ohio  
F. D. Croce & Co., Inc., New York, N.Y.  
Frank L. Deaner & Son, Benton Harbor, Mich.  
Fibre Berry Box Co., Hammond, La.  
Fibreboard Products, Inc., San Francisco, Calif.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Robert Gair Co., Inc., New York, N.Y.  
General Box Co., Chicago, Ill.  
Inman Mfg. Co., Amsterdam, N.Y.  
Marietta Fruit Package & Lumber Co., Marietta, Ohio  
Marvil Package Co., Laurel, Del.  
National Wooden Box Association, Washington, D.C.  
New Albany Box & Basket Co., New Albany, Ind.  
Ohio Boxboard Co., Rittman, Ohio  
Ripley Box & Basket Co., Inc., Ripley, Tenn.  
Roberts-Liggett Co., Metropolis, Ill.  
Rollrim Box Co., Benton Harbor, Mich.  
Spruce Veneer Package Corp., Puyallup, Wash.  
Tyson Orchard Service, Flora Dale, Pa.  
Webster Basket Co., Webster, N.Y.

## PREPACKAGING BUILDS DEMAND



## AND PROMOTES YOUR PROFITS

### HERE'S WHY:

Prepackaging has proved itself for the streamlined merchandising of fresh fruits.

Survey after survey has borne out the fact that consumers prefer prepackaged fruits over bulk fruit by a margin that often exceeds 10 to 1!

Your fruit will move faster; you will net greater profits and the reduction in spoilage will more than offset the fractional per-unit packaging cost.

### PREPACKAGING PAYS OFF!

With more and more growers entering the race for brand recognition, we can think of no better method of giving your fruit instant identification, complete brand acceptance and immediate volume increase than to prepackage in Oneida cellophane bags and printed overwraps.

These days two out of five items are bought on impulse. To get your share of this huge market you MUST prepackage. And there is nothing more effective than glistening, top-quality cellophane packages of Oneida.

Oneida's stock-size cellophane bags — plain or printed for prepackagers of fresh fruit.



Oneida printed cellophane bags in beautiful, glossy colors. Made-to-order sizes.



Oneida printed roll cellophane and sheet-wraps for growers with their own packaging machinery.

**ONEIDA**  
PAPER PRODUCTS, INC.  
25 Clifton Blvd., Clifton, N. J.

## PACKAGES and PACKAGING

### BOXES AND CRATES, CORRUGATED, FIBERBOARD, PAPERBOARD

American Box Board Co., Grand Rapids, Mich.  
American Fruit Growers, Inc., Chicago, Ill.  
Ashtabula Corrugated Box Co., Ashtabula, Ohio  
Atlas-Boxmakers, Inc., Chicago, Ill.  
Baltimore Paper Box Co., Baltimore, Md.  
Bird & Son, Inc., E. Walpole, Mass.  
California Container Corp., Emeryville, Calif.  
Container Corp. of America, Chicago, Ill.  
F. D. Croce & Co., Inc., New York, N. Y.  
Evansville Container Co., Evansville, Ind.  
Corrugated Container Co., Columbus, Ohio  
Fibreboard Products Inc., San Francisco, Calif.  
Fort Wayne Corrugated Co., Ft. Wayne, Ind.  
Friday Pack Co., Portland, Ore.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Robert Gair Co., Inc., New York, N. Y.  
Gaylord Container Corp., Atlanta, Ga.  
Hankins Container Co., Cleveland, Ohio  
Hinde & Dauch Paper Co., Sandusky, Ohio  
Hoerner Corp., Keokuk, Iowa  
Iowa Fiber Box Co., Keokuk, Iowa  
Martin Brothers Box Co., Aurora, Ind.  
Maryland Container Co., Baltimore, Md.  
Ohio Boxboard Co., Rittman, Ohio  
Pioneer Paper Stock Co., Chicago, Ill.  
Rollrim Box Co., Benton Harbor, Mich.  
Simplex Paper Corp., Adrian, Mich.  
Fred C. Strype, New York, N. Y.  
Traub Container Corp., Cleveland, Ohio

### BOXES AND CRATES, WOOD

Aetna Bottle & Container Co., St. Louis, Mo.  
Atlas Boxmakers, Inc., Chicago, Ill.  
John Bacon Co., Gasport, N. Y.  
Barden & Robeson Corp., Lockport, N. Y.  
California Barrel Co., Ltd., Los Angeles, Calif.  
F. D. Croce & Co., Inc., New York, N. Y.  
H. A. Du Bois & Sons, Inc., Cobden, Ill.  
Evansville Container Co., Evansville, Ind.  
General Box Co., Chicago, Ill.  
Green Co., New York, N. Y.  
F. W. Harrison & Son, Painesville, Ohio  
Mell Lumber Co., Philadelphia, Pa.  
T. R. Miller Mill Co., Inc., Brewton, Ala.  
National Wooden Box Assoc., Washington, D. C.  
New Albany Box & Basket Co., New Albany, Ind.  
New England Box Co., New York, N. Y.  
Rathborne, Hair & Ridgway Co., Chicago, Ill.  
Smeed Box Co., Cleveland, Ohio  
Sodus Basket Co., Sodus, N. Y.  
Southern Crate & Veneer Co., Macon, Ga.  
Spruce Veneer Package Corp., Puyallup, Wash.  
Traub Container Corp., Cleveland, Ohio

### CARTONS, CONSUMER

American Box Board Co., Grand Rapids, Mich.  
Atlas Boxmakers, Inc., Chicago, Ill.  
California Container Corp., Emeryville, Calif.  
F. D. Croce & Co., Inc., New York, N. Y.  
Fibreboard Products, Inc., San Francisco, Calif.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Friday Pack Co., Portland, Ore.  
Robert Gair Co., Inc., New York, N. Y.  
Leeds Sales Co., Inc., New York, N. Y.  
Maryland Container Co., Baltimore, Md.  
Ohio Boxboard Co., Rittman, Ohio  
Sutherland Paper Co., Kalamazoo, Mich.  
Tyson Orchard Service, Flora Dale, Pa.

### Cushions

John Bacon Co., Gasport, N. Y.  
Continental Paper Products Co., Denver, Colo.  
F. D. Croce & Co., Inc., New York, N. Y.  
Arthur A. Erny Co., St. Paul, Minn.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Georgia Cushion & Wrapper Co., Inc., Woodland, Ga.  
Hinde & Dauch Paper Co., Sandusky, Ohio  
Keyes Fibre Co., New York, N. Y.  
Kimberly-Clark Corp., Neenah, Wis.  
Rice, Trew & Rice Co., Inc., Biglerville, Pa.  
Simplex Paper Corp., Adrian, Mich.  
Fred C. Strype, New York, N. Y.  
Sutherland Paper Co., Kalamazoo, Mich.  
Tyson Orchard Service, Flora Dale, Pa.  
Webster Basket Co., Webster, N. Y.

### Films and Foils

Aluminum Co. of America, Pittsburgh, Pa.  
Brooks Paper Co., St. Louis, Mo.  
Dow Chemical Co., Midland, Mich.  
Celanese Corp. of America, New York, N. Y.  
E. I. du Pont de Nemours & Co., "Cellophane" Div., Wilmington, Del.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Goodyear Tire & Rubber Co., Akron, Ohio  
Oneida Paper Products, Inc., Clifton, N. J.  
Reynolds Metals Co., Louisville, Ky.  
Traver Corp., Chicago, Ill.

### Fringes

Continental Paper Products Co., Denver, Colo.  
Arthur A. Erny Co., St. Paul, Minn.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Georgia Cushion & Wrapper Co., Woodland, Ga.  
Pioneer Paper Stock Co., Chicago, Ill.  
Rice, Trew & Rice Co., Inc., Biglerville, Pa.  
Simplex Paper Corp., Adrian, Mich.  
Sutherland Paper Co., Kalamazoo, Mich.  
Tyson Orchard Service, Flora Dale, Pa.

# NO BRUISED APPLES NOW!



Every Apple Cushioned  
Every Apple Saleable  
in the NEW

# KYS-PAK

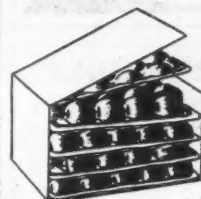


Diagram shows how KYS-PAK fits inside a wood, fibre or wire-bound container. Made in all sizes, from 56 to 163, which, if packed and graded properly, will weigh 42 lbs. net.

KYS-PAK protection against bruising means apples look better . . . command better prices. And KYS-PAK makes a perfect display . . . quickly set up . . . the purple colored trays enhancing the apples' appearance . . . stimulating sales.



Dealers call KYS-PAK  
"the best yet"

Yet KYS-PAK costs you less than other shipping methods — everybody profits. Ask your supplier for KYS-PAK or write Keyes Fibre Company, Packing Material Division, 30 Church St., New York.



# PACKAGES AND PACKAGING

**Flo-master**  
Valve-controlled  
FOUNTAINBRUSH



Felt tip writes on any surface.  
Leakproof. Dries instantly.

**SHIPPING** Addressing cartons, crates, small parcels.  
**FACTORY** Production, maintenance, inspection, inventory.  
**HOME** Addressing packages, labeling laundry, jars, stored items.  
**SCHOOL** Graphs, notices, art class sketches.  
**GROCERY** Price marking, signs and flash cards.

Stationery, art stores.  
Flo-master—any color ink  
Prices higher Western States and Canada

**CADO** Cushman & Denison Mfg. Co.  
125 West 2nd St. New York 11, N.Y.

**BETTER PACKERS**



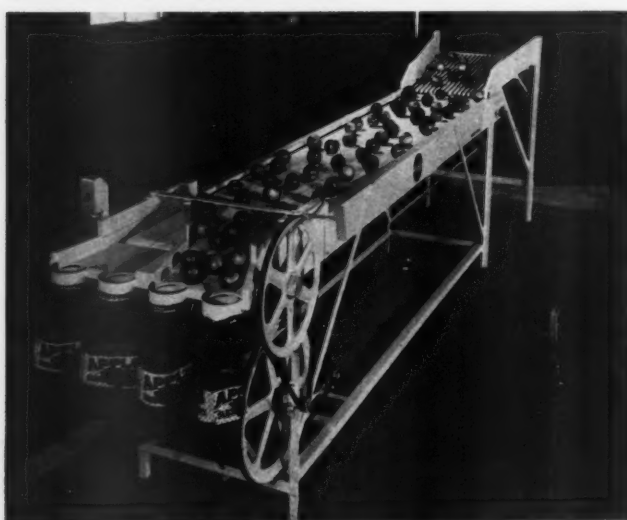
Everywhere are using corrugated fibre containers for the packing and shipment of their fruit. The fruit reaches destination in better condition.

Write for Samples and Prices  
**FRUIT & PRODUCE PACKING INC.**  
Indianapolis, Indiana

**SARANAC MACHINES**

produce the containers for shipping fruits and vegetables from every growing area of the world.

**SARANAC MACHINE COMPANY**  
Benton Harbor, Michigan



**TAUTZ MANUFACTURING COMPANY**  
GANGES, MICHIGAN

## Labels

American Colortype Co., Chicago, Ill.  
Bartlett Label Co., Kalamazoo, Mich.  
Brandau-Craig-Dickerson Co., Nashville, Tenn.  
F. D. Croce & Co., Inc., New York, N.Y.  
Calvert Lithographing Co., Detroit, Mich.  
F. D. Croce & Co., Inc., New York, N.Y.  
Dennison Mfg. Co., Framingham, Mass.  
Epsen Lithographing Co., Omaha, Nebr.  
Federal Container Co., Philadelphia, Pa.  
Fibreboard Products, Inc., San Francisco, Calif.  
Gamse Lithographing Co., Inc., Baltimore, Md.  
Lehman Printing & Litho. Co., San Francisco, Calif.  
Maryland Container Co., Baltimore, Md.  
Midwest Metal Specialties Co., Aurora, Ill.  
Milprint Inc., Milwaukee, Wis.  
A. B. Morse Co., St. Joseph, Mich.  
Schmidt-Lithograph Co., San Francisco, Calif.  
Tompkins Label Service, Philadelphia, Pa.  
Tyson Orchard Service, Florida Dale, Pa.  
United States Printing & Lithograph Co., Cincinnati, Ohio  
Waddell Printing Co., La Grange, Ind.

## Liners

John Bacon Co., Gasport, N.Y.  
Berryville Basket Co., Inc., Berryville, Va.  
Continental Paper Products Co., Denver, Colo.  
F. D. Croce & Co., Inc., New York, N.Y.  
Frank L. Deaner & Son, Benton Harbor, Mich.  
Arthur A. Erny Co., St. Paul, Minn.  
Evansville Container Co., Evansville, Ind.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Georgia Cushion & Wrapper Co., Woodland, Ga.  
Kimberly-Clark Corp., Neenah, Wis.  
New Albany Box & Basket Co., New Albany, Ind.  
Pioneer Paper Stock Co., Chicago, Ill.  
Rice, Trew & Rice Co., Inc., Biglerville, Pa.  
Simplex Paper Corp., Adrian, Mich.  
Fred C. Strype, New York, N.Y.  
Sutherland Paper Co., Kalamazoo, Mich.  
Tyson Orchard Service, Florida Dale, Pa.  
Webster Basket Co., Webster, N.Y.

## Marking Devices

Cushman & Denison Mfg. Co., New York, N.Y.  
Kin-E-Matic Machine Engineering Co., Dearborn, Mich.

## Packaging Machinery

Food Machinery Corp., Sprague-Sells Div.  
Hoopeston, Ill.  
Fruit Packette Corp., New York, N.Y.  
Gellman Mfg. Co., Rock Island, Ill.  
Hayssen Mfg. Co., Sheboygan, Wis.  
Knapp Mfg. Co., Los Angeles, Calif.  
Oliver Machine Co., Grand Rapids, Mich.  
Package Machinery Co., Springfield, Mass.  
Saranac Machine Co., Benton Harbor, Mich.  
Tautz Manufacturing Company, Ganges, Mich.

## Pads

John Bacon Co., Gasport, N.Y.  
California Container Corp., Emeryville, Calif.  
Continental Paper Products Co., Denver, Colo.  
Frank L. Deaner & Son, Benton Harbor, Mich.  
Fibreboard Products, Inc., San Francisco, Calif.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Georgia Cushion & Wrapper Co., Woodland, Ga.  
Hinde & Dauch Paper Co., Sandusky, Ohio

A new simplified  
assorting and  
packing belt  
for the entire  
fruit season.  
From sorting  
cherries to  
packing and  
bagging apples.

Write for more details.

Kimberly-Clark Corp., Neenah, Wis.  
New Albany Box & Basket Co., New Albany, Ind.  
Rice, Trew & Rice Co., Inc., Biglerville, Pa.  
Fred C. Strype, New York, N.Y.  
Tyson Orchard Service, Florida Dale, Pa.  
Webster Basket Co., Webster, N.Y.

## Paper, Shredded

John Bacon Co., Gasport, N.Y.  
Continental Paper Products Co., Denver, Colo.  
F. D. Croce & Co., Inc., New York, N.Y.  
Diamond-T-Waxed Paper Corp., Chicago, Ill.  
E. I. du Pont de Nemours & Co., Inc., "Cellophane" Div., Wilmington, Del.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Newark Paraffine & Parchment Paper Co., Newark, N.J.  
Rice, Trew & Rice Co., Inc., Biglerville, Pa.  
Simplex Paper Corp., Adrian, Mich.  
Fred C. Strype, New York, N.Y.  
Sylvania Industrial Corp., New York, N.Y.  
Tyson Orchard Service, Florida Dale, Pa.  
Webster Basket Co., Webster, N.Y.

## Paste

Clark-Stek-O Corp., Rochester, N.Y.  
Arabol Mfg. Co., New York, N.Y.

## Protective Coatings

Food Machinery Corp., Riverside, Calif.  
Goodyear Tire & Rubber Co., Akron, Ohio  
West Atlantic Corp., New York, N.Y.

## Stamping Inks and Pads

Jas. H. Matthews & Co., Pittsburgh, Pa.  
Rivet-O Mfg. Co., Orange, Mass.  
Stampit Co., Memphis, Tenn.  
Tyson Orchard Service, Florida Dale, Pa.

## Stamps, Rubber

Jas. H. Matthews & Co., Pittsburgh, Pa.  
J. L. May Co., New York, N.Y.  
Rivet-O Mfg. Co., Orange, Mass.  
Taylor Bros. Co., Cleveland, Ohio  
Tyson Orchard Service, Florida Dale, Pa.

**MARK YOUR PACKAGES WITH THIS STAMP**



**Clearly & Quickly**

This stamp has interchangeable type to change the size, grade and brand in a second. IT SPEEDS YOUR MARKING 200%. Can be made to meet requirements of every state. Write for prices and folder.

**MASSACHUSETTS MIN. SIZE 2% FANCY**  
Mass. Approved-Crate  
**GREENINGS**  
PACKED BY  
**R. D. MARCH**  
Shelburne Falls, Mass.

**RIVET-O MFG. CO.**  
60 Orchard St., Orange, Mass.

## Tray Packs

Friday Pack Co., Portland, Ore.  
Keyes Fibre Co., New York, N.Y.  
Traver Corp., Chicago, Ill.

## Wrappers

### OILED

F. D. Croce & Co., Inc., New York, N.Y.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Pioneer Paper Stock Co., Chicago, Ill.  
Simplex Paper Corp., Adrian, Mich.  
Fred C. Strype, New York, N.Y.  
Tyson Orchard Service, Florida Dale, Pa.  
United Paper Co., Tampa, Fla.

### PLAIN

Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Newark Paraffine & Parchment Paper Co., Newark, N.J.  
Riegel Paper Co., New York, N.Y.  
United Paper Co., Tampa, Fla.  
Wolf River Paper & Fiber Co., Shawano, Wis.

### TRANSPARENT

Brooks Paper Co., St. Louis, Mo.  
Celluloid Corp., New York, N.Y.  
E. I. du Pont de Nemours & Co., Inc., "Cellophane" Div., Wilmington, Del.  
Eastman Kodak Co., Rochester, N.Y.  
Firestone Tire & Rubber Co., Akron, Ohio  
B. F. Goodrich Co., Akron, Ohio  
Goodyear Tire & Rubber Co., Akron, Ohio  
Oneida Paper Products Co., Clifton, N.J.  
Thomas M. Royal & Co., Philadelphia, Pa.  
Fred C. Strype, New York, N.Y.  
Sylvania Industrial Corp., New York, N.Y.  
Traver Corp., Chicago, Ill.

**AMERICAN FRUIT GROWER**

# BUILDING CONSTRUCTION and MATERIALS

## Roofing and Siding

### COMPOSITION

Barrett Div., Allied Chemical & Dye Corp., New York, N.Y.  
Philip Carey Mfg. Co., Lockland, Ohio  
Celotex Corp., Chicago, Ill.  
Certain-Teed Products Corp., Chicago, Ill.  
Flintkote Co., Inc., New York, N.Y.  
A. C. Horn Co., Inc., Long Island City, N.Y.  
Johns-Manville Corp., New York, N.Y.  
Masonite Corp., Chicago, Ill.  
Paraffine Companies, Inc., San Francisco, Calif.  
Red Cedar Shingle Bureau, Seattle, Wash.  
Reynolds Metals Co., Louisville, Ky.  
Ruberoid Co., New York, N.Y.  
Truscon Steel Co., Youngstown, Ohio  
U. S. Gypsum Co., Chicago, Ill.

### STEEL

American Rolling Mill Co., Middletown, Ohio  
Bethlehem Steel Corp., Bethlehem, Pa.  
Blaw-Knox Co., Pittsburgh, Pa.  
Jim Brown Stores, Inc., Cleveland, Ohio  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Jones & Laughlin Steel Corp., Pittsburgh, Pa.  
Minneapolis-Moline Power Implement Co., Minneapolis, Minn.  
Pittsburgh Steel Co., Pittsburgh, Pa.  
Republic Steel Corp., Cleveland, Ohio  
Stran-Steel Div. of Great Lakes Steel Corp., Detroit, Mich.  
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.  
Truscon Steel Co., Youngstown, Ohio  
Wheeling Steel Corp., Wheeling, W. Va.

### Insulation

Armstrong Cork Co., Lancaster, Pa.  
Barrett Div., Allied Chemical & Dye Corp., New York, N.Y.  
Bird & Son, Inc., East Walpole, Mass.  
Brown Fence & Wire Co., Cleveland, Ohio  
Celotex Corp., Chicago, Ill.  
Certain-Teed Products Corp., Chicago, Ill.  
Chamberlin Co. of America, Detroit, Mich.  
Cork Import Corp., New York, N.Y.  
Eagle-Picher Sales Co., Cincinnati, Ohio  
Fir-Tex Insulation Board Co., Portland, Ore.  
Flintkote Co., New York, N.Y.  
Insulate Div. of Minnesota & Ontario Paper Co., Minneapolis, Minn.  
Johns-Manville Corp., New York, N.Y.  
Kalamazoo Tank & Silo Co., Kalamazoo, Mich.  
Kimberly-Clark Corp., Chicago, Ill.  
Masonite Corp., Chicago, Ill.  
National Gypsum Co., Buffalo, N.Y.  
Pacific Lumber Co., San Francisco, Calif.  
Ruberoid Co., New York, N.Y.  
Sisalkraft Co., Chicago, Ill.  
U. S. Gypsum Co., Chicago, Ill.  
United Cork Companies, W. Kearney, N.J.  
Universal Zonolite Insulation Co., Chicago, Ill.  
Wood Conversion Co., St. Paul, Minn.

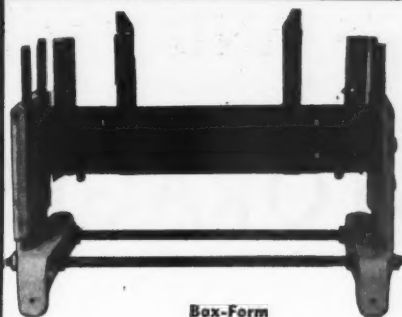
### Plumbing Fixtures

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
Chase Brass & Copper Co., Waterbury, Conn.  
Crane Co., Chicago, Ill.  
Kaustine Co., Inc., Perry, N.Y.  
Kewanee Private Utilities Co., Kewanee, Ill.  
Kohler Co., Kohler, Wis.  
Thos. Maddock's Sons, Co., Trenton, N.J.

### Paints, Varnishes & Enamels

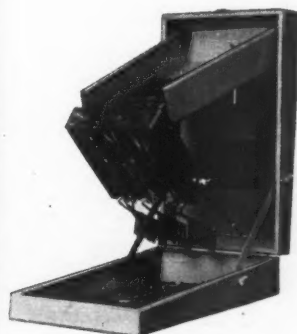
Aluminum Co. of America, Pittsburgh, Pa.  
American Chemical Paint Co., Ambler, Pa.  
Barrett Div., Allied Chemical & Dye Corp., New York, N.Y.  
Cook Paint & Varnish Co., Kansas City, Mo.  
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.  
Devco & Reynolds Co., Inc., New York, N.Y.  
Eagle-Picher Sales Co., Cincinnati, Ohio  
Glidden Co., Cleveland, Ohio  
Martin Varnish Co., Chicago, Ill.  
National Gypsum Co., Buffalo, N.Y.  
National Lead Co., New York, N.Y.  
Paraffine Companies, Inc., San Francisco, Calif.  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
Reynolds Metals Co., Louisville, Ky.  
Sherwin-Williams Co., Cleveland, Ohio  
Southport Paint Co., Savannah, Ga.  
United States Gypsum Co., Chicago, Ill.

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Box-Form

Wells & Wade Wenatchee Box  
Form made to form standard  
boxes—never gets out of plumb.



Nail Stripper

Equipment that  
saves the fruit grow-  
er, packer and ship-  
per time and mon-  
ey.

— U S E —  
WELLS & WADE  
Fruit Picking  
Buckets and Bags.  
The best made.

Clark Box  
Hatchet



Box Hatchet

Long or Short handle. The hatch-  
et that's used by professionals.

Wells & Wade Fruit  
Picking Buckets—  
the finest made.

Wells & Wade all metal Nail Stripper  
—light weight and strong. Closes  
together—easy to carry.

Write for prices and literature.

WELLS & WADE  
Wenatchee, Wash.  
Wholesale - - - Retail Picking Bucket



## Put Your Packaging Problems on Our Shoulders!



TELEPHONES  
Chicago  
PORTSMOUTH 3400  
Long Distance  
Summit 1600  
Via La Grange, Ill.

## ATLAS-BOXMAKERS, INC.

5025 WEST 65th STREET, DEPT. A, CHICAGO 38, ILLINOIS

## Folding Cartons

## Set-Up Boxes

## Corrugated and Solid Fibre

## Shipping Containers





# STORAGES



## Blowers, Fans, Diffusers

American Blower Corp., Detroit, Mich.  
Buffalo Forge Co., Buffalo, N.Y.  
Carrier Corp., Syracuse, N.Y.  
Clarage Fan Co., Kalamazoo, Mich.  
Frick Company, Waynesboro, Pa.  
Frigidaire Div., General Motors Corp., Dayton, Ohio  
General Electric Co., Bloomfield, N.J.  
Hlg Electric Ventilating Co., Chicago, Ill.  
Master Fan Corp., Los Angeles, Calif.  
Nash-Kelvinator Corp., Detroit, Mich.  
Niagara Blower Co., Buffalo, N.Y.  
Northern Blower Co., Cleveland, Ohio  
Western Blower Co., Seattle, Wash.  
Wolverine Blower Works, Grand Rapids, Mich.  
Worthington Pump & Machinery Corp., Harrison, N.J.

## Building Papers

Angier Corp., Framingham, Mass.  
Barrett Div., Allied Chemical & Dye Corp., New York, N.Y.  
Bird & Son, Inc., E. Walpole, Mass.  
Celotex Corp., Chicago, Ill.  
Sisalkraft Co., Chicago, Ill.

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Bean-Cutler Div., F.M.C., San Jose, Calif.  
E. W. Buschman Co., Cincinnati, Ohio

Chisholm-Ryder Co., Inc., Niagara Falls, N.Y.  
F. D. Croce Co., Inc., New York, N.Y.  
A. B. Farquhar Co., York, Pa.  
Food Machinery Corp., Riverside, Calif.  
Friend Mfg. Co., Gasport, N.Y.  
Lamson Corp., Syracuse, N.Y.  
Link-Belt Co., Chicago, Ill.  
Mathews Conveyor Co., Ellwood City, Pa.  
Rapids-Standard Co., Grand Rapids, Mich.  
Standard Conveyor Co., N. St. Paul, Minn.  
Trescott Co., Inc., Fairport, N.Y.

## Power

E. W. Buschman Co., Cincinnati, Ohio  
A. B. Farquhar Co., York, Pa.  
Lamson Corp., Syracuse, N.Y.  
Materials Movement Industries, Chicago, Ill.  
Mathews Conveyor Co., Ellwood City, Pa.  
Rapids-Standard Co., Grand Rapids, Mich.  
Standard Conveyor Co., N. St. Paul, Minn.  
Trescott Co., Inc., Fairport, N.Y.  
Triangle Equip. Co., Inc., Nutley, N.J.



## For Large or Small Storages

# Frick Refrigeration

Gives the dependable cooling service, based on generations of experience, that means most to growers. Air conditioning and pipe coil systems, to suit your exact wants. Get quotations now: Branch Offices and Distributors in principal cities everywhere.



## HOLD YOUR CROP AT TOP QUALITY IN INSULATED STORAGE

Properly designed cold storage facilities permit you to hold your crop in prime condition until the market is such that you can sell at the greatest profit.

Armstrong offers a complete line of efficient low-temperature insulations for construction of fruit storages. Also the services of skilled insulation mechanics and qualified engineers are available through Armstrong's Insulation Contract Service.

**SEND FOR FREE BOOKLET**—"Armstrong's Insulations for Fruit and Vegetable Storages" will give you helpful information and standards for insulating fruit storages. To get your free copy and for complete physical data about Armstrong's low-temperature insulations, write today to Armstrong Cork Co., Building Materials Division, 9500 Concord St., Lancaster, Pennsylvania.



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## DETAIL PLANS



for

## APPLE STORAGE

Basic construction plans for expandible apple storage in units from 5,000 to 15,000 bushel capacity, including details on the installation of PALCO WOOL Insulation are available, with no obligation. Economy and compactness of arrangement plus proper application of PALCO WOOL low-temperature Insulation contributes to maximum operating efficiency. Write today for free plans and blueprints.



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5225 Wilshire Blvd., Los Angeles 36, Calif.

**AMERICAN FRUIT GROWER**

## STORAGES

### Doors

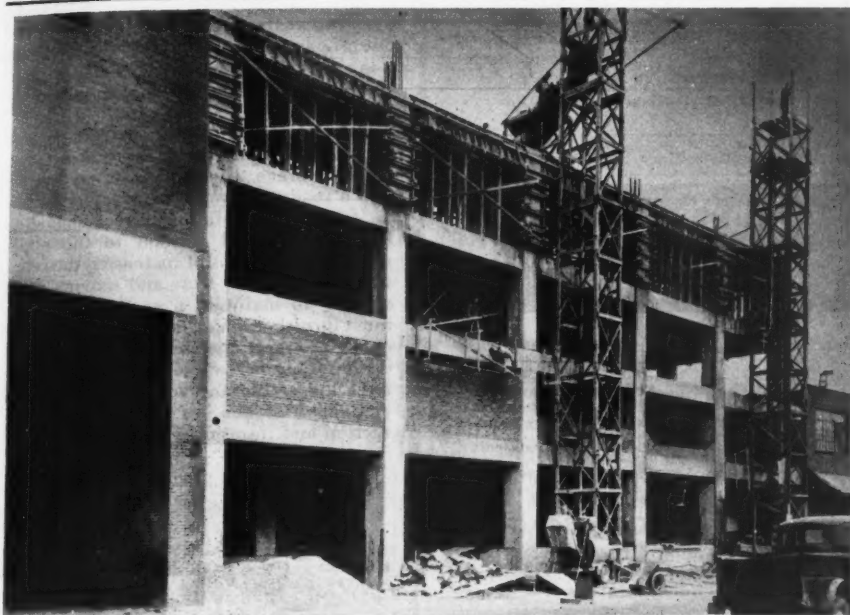
Craine, Inc., Norwich, N.Y.  
Bernard Gloekler Co., Pittsburgh, Pa.  
Harris Ice Machine Works, Portland, Ore.  
Jamison Cold Storage Door Co., Hagerstown, Md.  
National Refrigerator Co., St. Louis, Mo.  
Truscon Steel Co., Youngstown, Ohio  
York Corp., York, Pa.

### Humidifiers

American Blower Co., Detroit, Mich.  
Buffalo Forge Co., Buffalo, N.Y.  
Carrier Corp., Syracuse, N.Y.  
Frick Company, Waynesboro, Pa.  
Frigidaire Div., General Motors Corp., Dayton, Ohio  
General Electric Co., Bloomfield, N.J.  
Hlg Electric Ventilating Co., Chicago, Ill.  
Westinghouse Electric & Mfg. Co., E. Springfield, Mass.  
Worthington Pump & Machinery Corp., Harrison, N.J.

### Insulation

Armstrong Cork Co., Lancaster, Pa.  
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.  
Bird & Son, E. Walpole, Mass.  
Philip Carey Co., Lockland, Ohio  
The Celotex Corp., Chicago, Ill.  
Cork Insulation Co., Inc., New York, N.Y.  
Cork Import Corp., Englewood, N.J.  
Craine, Inc., Norwich, N.Y.  
Eagle-Picher Sales Co., Cincinnati, Ohio  
Insulite Co., Minneapolis, Minn.  
Johns-Manville Corp., New York, N. Y.  
Kalamazoo Tank & Silo Co., Kalamazoo, Mich.  
Kimberly-Clark Corp., Neenah, Wis.  
Masonite Corp., Chicago, Ill.  
Monsanto Chem. Co., St. Louis, Mo.  
Owens-Illinois Glass Co., Toledo, Ohio  
Pacific Lumber Co., San Francisco, Calif.  
Reflect-O, Inc., Chicago, Ill.  
Ruberoid Co., New York, N.Y.  
Servicised Products Corp., Chicago, Ill.  
Sisalkraft Co., Chicago, Ill.  
United Cork Companies, W. Kearny, N.J.  
United States Gypsum Co., Chicago, Ill.  
Universal Zonolite Insulation Co., Chicago, Ill.  
Whittaker, Clark & Daniels, Inc., New York, N.Y.  
Wood Conversion Co., St. Paul, Minn.



## It pays to build it right

When you build or remodel your fruit storage, you probably won't need as much room as the C. L. Robinson Ice and Cold Storage Company, whose plant in Winchester, Va., can store 400,000 bushels of apples at a time. But you can take advantage of the experience Robinson has had with insulation over the past 46 years.

Installing Novoid Corkboard Insulation costs little if any more, they've discovered, than putting in inferior materials. And over the years, the continuing low cost for refrigeration assured by this efficient insulation pays off handsomely. "We have tried other materials,"

says Mr. H. Delmer Robinson, "and have found corkboard is the best insulation."

As Guy J. Hafer, the contractor who installed Novoid in this new plant, can tell you—Novoid is just as practical for the small storage as the big one. Throughout America, leading local insulation contractors handle Novoid. For this storage building, it was supplied by the Elkwood Companies, Inc., of Harrisburg, Pa.

Not only Novoid Corkboard but Novoid Cork Covering for cold lines is available near you. Ask your contractor, or write direct to Cork Import Corporation, 39 Park Place, Englewood, New Jersey.

## NOVOID INSULATION

CORK BOARD • PIPE COVERING  
JULY, 1948

# SAVE TIME



### WITH RAPID-WHEEL\* CONVEYOR

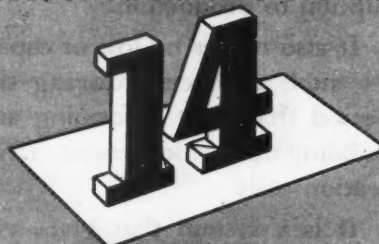
Be prepared to move your crop in a hurry when the time comes. Let your boxes and baskets roll on Rapid-Wheel gravity conveyor. It will save you time when time is important . . . and it will save you money. Rapid-Wheel conveyor is available in steel or aluminum . . . quickly set up or changed from job to job. \*T.M.

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Representatives in principal cities

## RAPISTAN

MATERIAL HANDLING EQUIPMENT

SELECT FROM THIS SYSTEM



## COLD STORAGE WAREHOUSES

to help protect your

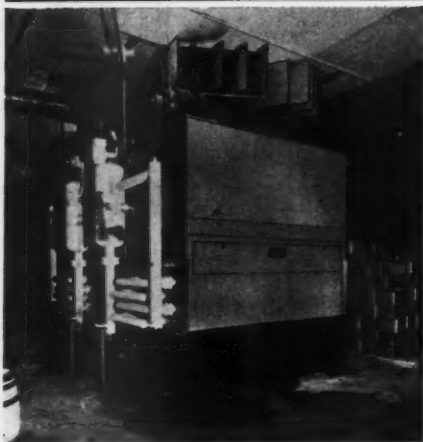
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Cold Storage Division  
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# "NO-FROST" MEANS NEVER WITH THE NIAGARA "NO-FROST" METHOD



● Using the Niagara "NO-FROST" Method there is NEVER any accumulation of frost and ice on the refrigeration unit. That means NO defrosting ...none of its troubles and interruption to production.

It also means no loss of capacity such as occurs during the period that frost is forming and building up in thickness on refrigeration coils.

It is a system that gives you always the full capacity your plant was designed for...that is, capacity you have never been able to use if frost accumulates.

Niagara "NO-FROST" Systems make more money for their owners by increasing production and by operating with lower cost for power.

Write for Bulletin No. 83-AF

## NIAGARA BLOWER COMPANY

Over 30 Years of Service in Industrial Air Engineering

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District Engineers in Principal Cities



## STORAGES

### Refrigeration Machinery

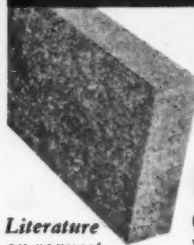
Baker Ice Machine Co., Inc., Omaha, Nebr.  
Brunner Mfg. Co., Utica, N.Y.  
Carrier Corp., Syracuse, N.Y.  
Curtis Refrigerating Machine Co., St. Louis, Mo.  
De LaVerge Engine Co., Inc., Philadelphia, Pa.  
Dicelco Div. General Machine & Mfg. Co., Berwick, Pa.  
Frick Company, Waynesboro, Pa.  
Frigidaire Div., General Motors Corp., Dayton, Ohio  
General Electric Co., Bloomfield, N.J.  
Harris Ice Machine Works, Portland, Ore.  
Howe Ice Machine Co., Chicago, Ill.  
International Harvester Co., Chicago, Ill.  
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.  
Niagara Blower Co., New York, N.Y.  
Norge Corp., Detroit, Mich.  
Servel, Inc., Evansville, Ind.  
Vilter Mfg. Co., Milwaukee, Wis.  
Westinghouse Electric & Mfg. Co., E. Springfield, Mass.  
Worthington Pump & Machinery Corp., Harrison, N.J.  
Yates-American Machine Co., General Refrigeration Div., Beloit, Wis.  
York Corp., York, Pa.

### Refrigeration and Storage

City Ice & Fuel Co., Chicago, Ill.  
Coolerator Co., Duluth, Minn.  
Merchants Refrigerating Co., New York, N.Y.

## UNITED'S B. B. (BLOCK BAKED) CORKBOARD INSULATION

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Assures maximum insulation efficiency at minimum cost. Moisture-resistant, compact, light weight, sanitary, structurally strong, flexible.

Write for particulars

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CORK COMPANIES  
WEST KEARNY, N.J.

Literature on request

### Thermometers

Braun-Knecht-Heimann Co., San Francisco, Calif.  
Bristol Co., Waterbury, Conn.  
Eimer & Amend, New York, N.Y.  
Fleischhauer, Fr. & Son, Hollis, N.Y.  
H-B Instrument Co., Philadelphia, Pa.  
Precision Thermometer & Instrument Co., Philadelphia, Pa.  
Taylor Instrument Co., Rochester, N.Y.

### Thermostats

Baker Ice Machine Co., Inc., Omaha, Nebr.  
Bristol Co., Waterbury, Conn.  
Carrier Corp., Syracuse, N.Y.  
Frick Company, Waynesboro, Pa.  
General Electric Co., Schenectady, N.Y.  
H-B Instrument Co., Inc., Philadelphia, Pa.  
Powers Regulator Co., Chicago, Ill.  
Precision Thermometer & Instrument Co., Philadelphia, Pa.  
Taylor Instrument Co., Rochester, N.Y.  
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

### Ventilators

Craine, Inc., Norwich, N.Y.  
Hlg Electric Ventilating Co., Chicago, Ill.  
James Mfg. Co., Ft. Atkinson, Wis.  
Louden Machinery Co., Fairfield, Iowa

### Waterproofing Compounds

American Fluoresit Co., Inc., Cincinnati, Ohio  
Barrett Div. Allied Chemical & Dye Corp., New York, N.Y.  
Bird & Son, Inc., E. Walpole, Mass.  
Philip Carey Mfg. Co., Cincinnati, Ohio  
Celotex Corp., Chicago, Ill.  
Ceresit Waterproofing Corp., Chicago, Ill.  
Flintkote Co., New York, N.Y.  
Johns-Manville Corp., New York, N.Y.  
Koppers Products Co., Pittsburgh, Pa.  
Pittsburgh Plate Glass Co., Columbia Chemical Div., Pittsburgh, Pa.

### Wood Preserving

Fred Alper Industries, Inc., Philadelphia, Pa.  
American Fluoresit Co., Inc., Cincinnati, Ohio  
Barrett Div. Allied Chemical & Dye Corp., New York, N.Y.  
Cuprinol, Inc., Simsbury, Conn.  
Planetary Chemical Co., Creve Coeur, Mo.  
Tyson Orchard Service, Florida Dale, Pa.

*"My apples have longer life and are scald free"*

Due to

## DOREX ACTIVATED CARBON, says apple grower

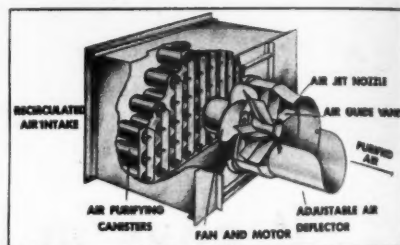
In an unsolicited letter, Sam R. Levering, orchardist of Ararat, Virginia, said:

"As you know, my cold storage is equipped with DOREX Activated Carbon. I have two storage rooms with a total capacity of 14,000 bushels.

"My experience with the carbon extends over two years. I store in field crates without oil paper and fresh pack, thus avoiding a labor peak. In the past I had scald; but since installing the carbon, I have had no scald.

"Already the buyers know that my apples do not break down as soon as taken out of storage. Consequently, my apples find a ready market at satisfactory prices.

"I have no hesitation in recommending DOREX Activated Carbon to the apple growers as a means of increasing the reputation of Eastern fruit and moving more apples. To maintain a good demand, we must furnish apples that will stand up long enough to reach the housewife in good condition. This my apples do, because they have longer life and are scald free due to Activated Carbon. To me it is cheap protection and insurance."



Dorex Apple Preservation Units extend the storage life of apples, reduce scald and protect the flavor by removing ethylene ripening gas, scald gases and taste-impairing odors. The Dorex Unit continuously circulates the storeroom air and forces it through the canisters filled with activated carbon which literally soaks up the gases and odors like a sponge soaks up water.

For free literature giving the complete details on this new storage method which will help you get more money for your apples, fill in and mail the coupon below.

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### W. B. CONNOR ENGINEERING CORP.

at 12 East 32nd Street, New York 16, N.Y.

Gentlemen:

Please send me free literature on Dorex Apple Preservation Units.

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AMERICAN FRUIT GROWER

# ORCHARD SANITATION

## Bands, Tree

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Bemis Bro. Bag Co., St. Louis, Mo.  
Fruit & Produce Packing, Inc., Indianapolis, Ind.  
Edwin H. House, Saugatuck, Mich.  
M. A. Koeller, Barry, Ill.  
Miller Chem. & Fertilizer Corp., Baltimore, Md.  
Owens-Illinois Glass Co., Toledo, Ohio  
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Rice, Trew & Rice Co., Biglerville, Pa.  
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## Beta Naphthol

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## FRIGHTEN THE BIRDS

Why take staggering losses year after year from bird-feeding in your fruit plantings? Humanely rid your orchard, grove or small-fruit patch of crop-destroying birds with our exploder that NEVER "falls asleep." Loud, blasting reports and beams of light at night spell terror to birds and foliage-destroying animals. Order now. Protect valuable crops with

### THE AUTOMATIC EXPLODER

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Dobbins Mfg. Co., Elkhart, Ind.  
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A. M. Leonard & Son, Piqua, Ohio  
Seymour Smith & Son, Inc., Oakville, Conn.  
Carroll R. Tiffany, Conklin, N.Y.  
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Valley Foundry & Machine Works, Inc., Fresno, Calif.

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Shell Oil Co., New York, N.Y.  
Standard Oil Co. of Indiana, Chicago, Ill.

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Alert Electric Door Control Co., Los Angeles, Calif.  
Chicago Electric Scientific Co., Chicago, Ill.  
Detjen Corp., New York, N.Y.  
Electric Fly Screen Co., Inc., Lindenhurst, L.I., N.Y.  
Gardner Mfg. Co., Horicon, Wis.  
Insect Electrocuter Co., Cincinnati, Ohio  
Wentzel Insect Light Traps, Greensburg, Pa.

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TRAPS  
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Animal Trap Co. of America, Lititz, Pa.  
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Remington Arms Co., Inc., Bridgeport, Conn.

## Scrapers, Bark

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Principles and Practices of Orchard, Small Fruit and Garden Culture

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452 pages with 129 engravings.

General Horticulture has been prepared for the purpose of presenting the complete and modern view of the culture of fruits, vegetables and ornamental plants in such a manner as to meet the real need of students and progressive producers. Special chapters deal with basic problems not usually covered in horticultural books. Sent postpaid on receipt of \$4.00.

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### BURNERS AND TORCHES

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Dobbins Mfg. Co., Elkhart, Ind.  
General Corporation, Dallas, Texas.  
Hauck Mfg. Co., Brooklyn, N.Y.  
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## KILL POISON IVY

Stalks, Roots, Split rocks, disinfect with PORTABLE WEED TORCH Fast, Sure, Economical.  
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with 100 PRACTICAL USES!

KILL WEEDS, crab grass, Canada thistle, stalks, seeds and roots. Destroy brush, caterpillar nests, diseased trees, gnawholes, chinch bugs, etc. Clear irrigation ditches, split rocks, burn tree stumps.



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### Orchard Model HERCULES BRUSH SHREDDER

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FRESNO, CALIFORNIA

Cut labor costs! Make much from pruning brush, with a HERCULES Brush Shredder. Drawn by medium tractor, the HERCULES "chews" brush to 1" diameter, spreads it evenly on ground. Two models, for orchard and field use.

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Fresno 18, California - Dept. H  
Please send me further information on your HERCULES Brush Shredder.

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From where I sit ... by Joe Marsh

## Sam's Hens Wear Spectacles!

Yes, it's an honest-to-goodness fact! Sam's brood of two dozen hens are wearing spectacles—which he bought from a mail-order house in Capitol City.

Sam says that it really works (and big poultry raisers say so, too). The hens see each other through soft colored glasses, and instead of fighting and picking at each other, they go around placidly, gain weight, and lay more eggs.

Makes me almost wish we could have rose-colored glasses for human beings, too. So that instead of quarreling and criticizing, like we

do so much of the time, we'd live and let live in contentment.

From where I sit, the human race wastes a powerful lot of time in wrangling over minor issues... whether a man should drink beer or cider... whether a woman should wear slacks or skirts... instead of seeing each other through "spectacles" of tolerance that enable us to live-and-let-live like Sam's brood of chickens.

Joe Marsh



## ORCHARD INSTRUMENTS

### Barometers

Bristol Co., Waterbury, Conn.  
Fleischhauer, Fr. & Son, Hollis, N.Y.  
Precision Thermometer & Instrument Co., Philadelphia, Pa.  
Scientific Instrument Co., Detroit, Mich.  
Taylor Instrument Co., Rochester, N.Y.

### Hydrometers

Eimer & Amend, New York, N.Y.  
Fleischhauer, Fr. & Son, Hollis, N.Y.  
Precision Thermometer & Instrument Co., Philadelphia, Pa.  
E. W. Schultheis, Brooklyn, N.Y.  
Taylor Instrument Co., Rochester, N.Y.  
Tyson Orchard Service, Flora Dale, Pa.

### Hygrometers

Bristol Co., Waterbury, Conn.  
Eimer & Amend, New York, N.Y.  
Precision Thermometer & Instrument Co., Philadelphia, Pa.  
Taylor Instrument Co., Rochester, N.Y.  
Tyson Orchard Service, Flora Dale, Pa.

### Magnifiers, Hand

American Optical Co., Scientific Instrument Div., Buffalo, N.Y.  
American Optical Co., Southbridge, Mass.  
Bausch & Lomb Optical Co., Rochester, N.Y.  
Tyson Orchard Service, Flora Dale, Pa.  
Carl Zeiss, Inc., New York, N.Y.

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Bausch & Lomb Optical Co., Rochester, N.Y.  
Eimer & Amend, New York, N.Y.  
Carl Zeiss, Inc., New York, N.Y.

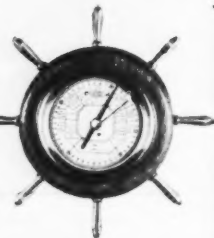
### Thermometers

Bristol Co., Waterbury, Conn.  
Eimer & Amend, New York, N.Y.  
Frick Company, Waynesboro, Pa.  
A. M. Leonard & Son, Piqua, Ohio  
Precision Thermometer & Instrument Co., Philadelphia, Pa.  
C. J. Tagliabue Div., Portable Products Corp., Brooklyn, N.Y.  
Taylor Instrument Co., Rochester, N.Y.

## TOMORROW'S WEATHER TODAY!

### SHIP'S WHEEL STORMGUIDE

PREDICT local storms and frost with this dependable barometer. Detailed forecast dial also foretells best time for spraying. In handsome, hand-rubbed walnut case with solid brass spokes. Simple altitude adjustment insures accurate forecast for your locality. No. 2233, a bargain, \$15.

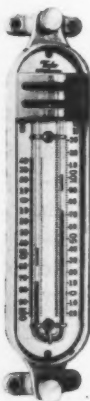


### MAXIMUM-MINIMUM THERMOMETER

FIGHT FROST with Taylor's "High-Low" Thermometer which shows the highest and lowest temperatures since last setting, plus temperature now. Also helps plan the location of new orchards by detecting cold zones. Warns when to start smudge pots. Tiny steel indicators inside of tube stay put till reset with magnet. Thousands used by the U. S. Navy. No. 5448, only \$10.

### MINIMUM THERMOMETER

SPECIALLY DESIGNED for and approved by Fruit Growers' Associations! Ranged 10° to 80°F in 1° divisions (has expansion safety chamber for higher temperature). Also has black index for registering minimum temperature. No. 5499, \$6.



Taylor

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Merck & Co., Inc., Rahway, N.J.

#### Cans

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Continental Can Co., Inc., New York, N.Y.  
National Can Co., Inc., New York, N.Y.  
Thompson Can Co., Dallas, Texas

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Scientific Filter Co., New York, N.Y.  
Wyodak Chemical Co., Cleveland, Ohio

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Boutell Mfg. Co., Rochester, N.Y.  
Burns Mfg. Co., Syracuse, N.Y.  
Food Machinery Corp., Sprague-Sells Div. Hoopeston, Ill.  
F. B. Pease Co., Rochester, N.Y.

Rollman Mfg. Co., Mt. Joy, Pa.  
Urschel Laboratories, Inc., Valparaiso, Ind.  
Zastrow Machine Co., Baltimore, Md.

#### Fruit Jars

Ball Brothers Co., Muncie, Ind.  
Hazel-Atlas Glass Co., Wheeling, W.Va.  
Kerr Glass Mfg. Corp., Sand Springs, Okla.  
Libbey Glass Div., Owens-Illinois Glass Co., Toledo, Ohio

#### Novelty Containers

Fred Leighton's Mexican Imports, New York, N.Y.

#### Pectin

California Fruit Growers' Exchange, Products Dept., Ontario, Calif.  
General Foods Sales Co., New York, N.Y.  
Pen-Jel Corp., Kansas City, Mo.

#### Peelers

Boutell Mfg. Co., Rochester, N.Y.  
Food Machinery Corp., Sprague-Sells Div. Hoopeston, Ill.  
Sanitary Food Processing Co., Seattle, Wash.

#### Pomace Pickers

A. B. Farquhar Co., York, Pa.

#### Pulpers

Enterprise Mfg. Co., Philadelphia, Pa.  
A. B. Farquhar Co., York, Pa.  
Food Machinery Corp., Anderson-Barngrover Div., San Jose, Calif.  
F. H. Langsenkamp Co., Indianapolis, Ind.

#### Sealers

Food Machinery Corp., Anderson-Barngrover Div., San Jose, Calif.  
National Can Co., Inc., New York, N.Y.  
National Pressure Cooker Co., Eau Claire, Wis.

#### Slicers

Boutell Mfg. Co., Rochester, N.Y.  
Enterprise Mfg. Co., Philadelphia, Pa.  
Food Machinery Corp., Anderson-Barngrover Div., San Jose, Calif.  
Killefir Mfg. Co., Los Angeles, Calif.  
F. B. Pease Co., Rochester, N.Y.  
Rollman Mfg. Co., Mt. Joy, Pa.  
Urschel Laboratories, Inc., Valparaiso, Ind.

#### Sorting & Trimming Tables

A. B. Farquhar Co., York, Pa.

#### Spray Coolers

A. B. Farquhar Co., York, Pa.

#### Sulphur Dioxide

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.  
Virginia Smelting Co., West Norfolk, Va.

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National Sulphur Co., Inc., New York, N.Y.  
Philipp Bros., Inc., New York, N.Y.  
Stauffer Chemical Co., New York, N.Y.  
Virginia Smelting Co., West Norfolk, Va.

### Dehydrators

Boutell Mfg. Co., Rochester, N.Y.  
J. P. Devine Mfg. Co., Mt. Vernon, Ill.  
L. N. Miller Dehydrating Co., Eugene, Ore.  
Moore Dry Kiln Co., No. Portland, Ore.  
Proctor & Schwartz, Inc., Philadelphia, Pa.

### Evaporators

Buffalo Foundry & Machine Co., Buffalo, N.Y.  
Arthur Harris Co., Chicago, Ill.  
Pfaudler Co., Rochester, N.Y.

### JUICE EXTRACTING

#### Caps and Closures

Armstrong Cork Co., Lancaster, Pa.  
Ball Bros. Co., Muncie, Ind.  
Crown Cork & Seal Co., Baltimore, Md.  
Cupples Co., St. Louis, Mo.  
Hazel-Atlas Glass Co., Wheeling, W.Va.  
Kerr Glass Mfg. Corp., Sand Springs, Okla.  
Owens-Illinois Glass Co., Toledo, Ohio  
Phoenix Metal Cap Co., Chicago, Ill.

#### Extractors, Juice

Burns Mfg. Co., Syracuse, N.Y.  
Chisholm-Ryder Co., Inc., Niagara Falls, N.Y.  
Enterprise Mfg. Co., Philadelphia, Pa.  
L. O. Koven & Bro., Inc., Jersey City, N.J.  
F. H. Langsenkamp Co., Indianapolis, Ind.  
New Standard Corp., Mt. Joy, Pa.

#### Filters, Fruit Juice

Chisholm-Ryder Co., Inc., Niagara Falls, N.Y.  
Cuno Engineering Co., Meriden, Conn.  
Food Machinery Corp., Anderson-Barngrover Div., San Jose, Calif.  
Johns-Manville Corp., New York, N.Y.  
Palmer Cider Supplies, Inc., Cos Cob, Conn.  
Republic Filters, Inc., New York, N.Y.  
Scientific Filter Co., New York, N.Y.

#### Graters

A. B. Farquhar Co., York, Pa.  
Hamilton Metal Products Co., Hamilton, Ohio  
New Jersey Agricultural Works, Trenton, N.J.  
Palmer Cider Supplies, Inc., Cos Cob, Conn.  
Thomas-Albright Co., Goshen, Ind.

#### Grinders

A. B. Farquhar Co., York, Pa.  
Food Machinery Corp., Anderson-Barngrover Div., San Jose, Calif.  
New Jersey Agricultural Works, Trenton, N.J.  
Palmer Cider Supplies, Inc., Cos Cob, Conn.  
Papee Machine Co., Shortsville, N.Y.  
J. B. Sedberry, Inc., Utica, N.Y.  
Thomas-Albright Co., Goshen, Ind.

#### Presses, Fruit

Cutaway Harrow Co., Higganum, Conn.  
Enterprise Mfg. Co., Philadelphia, Pa.  
A. B. Farquhar Co., York, Pa.  
Food Machinery Corp., Anderson-Barngrover Div., San Jose, Calif.  
New Jersey Agricultural Works, Trenton, N.J.  
Palmer Cider Supplies, Inc., Cos Cob, Conn.  
Thomas-Albright Co., Goshen, Ind.

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Heyden Chemical Corp., New York, N.Y.  
Mallinckrodt Chemical Works, St. Louis, Mo.  
Monsanto Chemical Co., St. Louis, Mo.  
Philipp Bros. Inc., New York, N.Y.  
Seydel Chemical Co., Jersey City, N.J.

AMERICAN FRUIT GROWER

# TRANSPORTATION EQUIPMENT and SUPPLIES

## TRUCKS

Chevrolet Motor Div., General Motors Corp., Detroit, Mich.  
Chrysler Corp., Dodge Truck Div., Detroit, Mich.  
Chrysler Corp., Plymouth Div., Detroit, Mich.  
Diamond T Motor Car Co., Chicago, Ill.  
Dodge Truck Div. of Chrysler Corp., Detroit, Mich.  
Ford Motor Co., Dearborn, Mich.  
GMC Truck & Coach Div., General Motors Corp., Pontiac, Mich.  
Hudson Motor Car Co., Detroit, Mich.  
International Harvester Co., Chicago, Ill.  
Marmon-Herrington Co., Inc., Indianapolis, Ind.  
Nash Motors Div., Nash-Kelvinator Corp., Detroit, Mich.  
Plymouth Div., Chrysler Corp., Detroit, Mich.  
Reo Motor Inc., Lansing, Mich.  
Studebaker Corp., South Bend, Ind.  
White Motor Co., Cleveland, Ohio  
Willys-Overland Motors, Inc., Toledo, Ohio

## AUTOMOTIVE ACCESSORIES

### Anti-Freeze

Carbide & Carbon Chemicals Corp., Unit of Union Carbide & Carbon Corp., New York, N.Y.  
Commercial Solvents Corp., New York, N.Y.  
Firestone Tire & Rubber Co., Akron, Ohio  
National Carbon Co., Inc., New York, N.Y.

### Batteries

Auto-Lite Battery Corp., Toledo, Ohio  
Delco-Remy Div., General Motors Corp., Anderson, Ind.  
Thomas A. Edison, Inc., West Orange, N.J.  
Electric Storage Battery Co., Philadelphia, Pa.  
Firestone Tire & Rubber Co., Akron, Ohio  
Fisk Tire Co., New York, N.Y.  
Goodyear Tire & Rubber Co., Akron, Ohio  
National Battery Co., St. Paul, Minn.  
Prest-O-Lite Battery Co., Inc., Indianapolis, Ind.  
Ray-O-Vac Co., Madison, Wis.  
United Motors Service, Div. of General Motors Corp., Detroit, Mich.  
United States Rubber Co., New York, N. Y.  
Willard Storage Battery Co., Cleveland, Ohio

## Bearings

Hyatt Bearings Div., General Motors Corp., Harrison, N.J.  
New Departure Mfg. Co., Bristol, Conn.  
SKF Industries, Inc., Philadelphia, Pa.  
Timken Roller Bearing Co., Canton, Ohio

## Chains

American Chain Div., American Chain & Cable Co., Bridgeport, Conn.  
Columbus-McKinnon Chain Co., Tonawanda, N.Y.  
Horner Tractor Sales, Geneva, Ohio

## Piston Rings

Hastings Mfg. Co., Hastings, Mich.  
Perfect Circle Co., Hagerstown, Ind.

## Spark Plugs

A. C. Spark Plug Div., General Motors Corp., Flint, Mich.  
Champion Spark Plug Co., Toledo, Ohio  
Edison-Spittordf Corp., W. Orange, N.J.  
Electric Auto-Lite Co., Toledo, Ohio  
Firestone Tire & Rubber Co., Akron, Ohio  
Fisk Tire Co., New York, N.Y.

## Radiator Cleaners

Hygienic Products Co., Canton, Ohio

## Tires and Tubes

Firestone Tire & Rubber Co., Akron, Ohio  
Fisk Tire Co., New York, N.Y.  
General Tire & Rubber Co., Akron, Ohio  
Gillette Rubber Co., Eau Claire, Wis.  
B. F. Goodrich Co., Akron, Ohio  
Goodyear Tire & Rubber Co., Inc., Akron, Ohio  
Kelly-Springfield Tire Co., Cumberland, Md.  
Lee Rubber & Tire Corp., Conshohocken, Pa.  
Mansfield Tire & Rubber Co., Mansfield, Ohio  
Pennsylvania Rubber Co., Jeannette, Pa.  
Reynolds Metals Co., Louisville, Ky.  
Seiberling Rubber Co., Akron, Ohio  
United States Rubber Co., New York, N.Y.

## Tire Pumps and Accessories

ADAPTERS  
Firestone Tire & Rubber Co., Akron, Ohio  
Goodyear Tire & Rubber Co., Inc., Akron, Ohio  
The F. E. Myers & Bro. Co., Ashland, Ohio

## AIR COMPRESSORS

Curtis Refrigerating Machine Co., St. Louis, Mo.  
DeVilbiss Co., Toledo, Ohio  
Gill-Owen Co., Litchfield, Ill.  
Poweraire Corp., Chicago, Ill.  
South Windsor Mfg. Co., E. Windsor Hill, Conn.  
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HANDY



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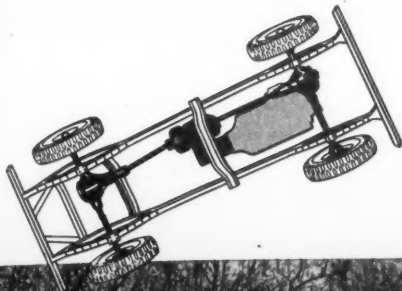
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Experienced orchardists are swinging away from trees which require extra years of waiting. They simply make sure they buy from the Trade-mark and Patent owners to get improved varieties propagated direct-in-line from the original Champion Parent trees. These "Record-Bearing Strain" (Trade-mark) trees are sold only by Stark Bros.

Each Stark tree is "fattened" before it is dug—loaded with rich plant food elements from selected soils. This prac-

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Grafting is by Stark's Double-Heavy Root System Method using the entire, vigorous, undivided root system instead of just one piece of root from a yearling seedling as is often done. This costs us more, but gives the tree super-heavy roots to speed up growth and younger bearing—gives it years' head start.

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Get new De Luxe Edition of the greatest color fruit book ever published. See how simple it now is to grow prize fruits, shrubs, and roses. Look at actual specimens in true-to-life size and color. These are fruits you can grow—pictured through the magic of new color photography. Beautiful pictorial ripening chart shows seasons when various varieties of fruits ripen—shows at a glance how to plan continuous succession of ripe fruits from early to late. Color photos of living fruit make selection

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